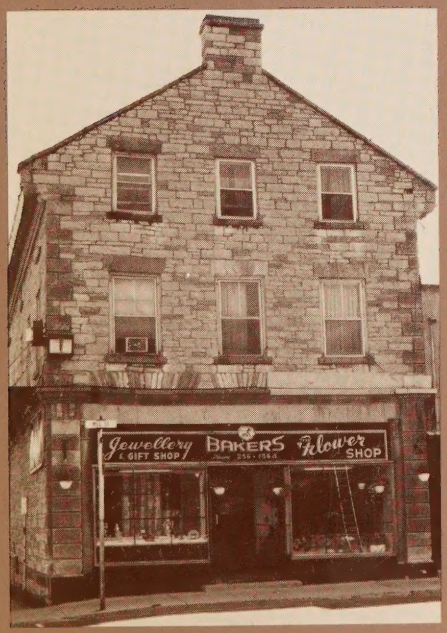
PLANNING AND DESIGN FOR

COMMERCIAL FACADE IMPROVEMENTS



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PLANNING AND DESIGN FOR
COMMERCIAL FACADE IMPROVEMENTS

Ministry of
Municipal Affairs
Ontario
Community Planning Wing

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and
Research and Special Projects Branch

Preface

Communities across Ontario have a renewed interest and pride in the vitality of their commercial areas. New attitudes, backed by new investments, have been gaining ground over the past decade or two, and now have broad popular support.

Healthy competition between individual merchants has been joined by an important spirit of cooperation within the commercial area. This is a powerful combination which should result in revitalized commercial areas to the financial and social benefit of all— the merchant, the commercial area, and the community.

The Ministry of Municipal Affairs has helped with the improvement of commercial areas through the Main Street Program, the Ontario Downtown Revitalization Program and, presently, with the Commercial Area Improvement Program. In cooperation with the local communities, there has been significant revitalization of many commercial areas in Ontario communities to date.

The Ministry's handbook, **Planning and Design for Commercial Area Improvements**, 1985, combines technical information and practical experience on improving the public aspects of older commercial districts—that is, the roads and sidewalks, street trees and planting, lighting and street furniture. The subject of this companion handbook, **Planning and Design for Commercial Facade Improvements**, deals with the private aspects of streetscape—the upgrading of the fronts, or facades, of the commercial buildings.

Many municipalities, Business Improvement Areas (BIAs) and private businesses recognize the value of commercial facade improvements. Some communities have already produced building renovation and facade improvement guidelines as part of broader revitalization studies, but most of the communal energy to date has been expended on improvements to public areas as the first step. Attention is now turning to the other side of the revitalization coin: **commercial facade improvements**.

This handbook provides technical information for the wide range of people interested in commercial facade improvement. For the businessman and property owner there is information specifically geared to his or her building: how to determine what improvements may be required; where to start; and some practical advice on costs. For the architect, engineer or contractor, there is detailed information on improvements and, on materials and maintenance. For municipal staff and councillors, there is a chapter devoted to how the municipality might assist in the coordinated renovation of the facades in their commercial areas. In particular, it is suggested that a municipally-sponsored commercial facade improvement study be carried out.

The illustrations and photos for this handbook are all from Ontario communities and represent the wide range of facades, their problems and suggested solutions. There is also a glossary of terms following the final chapter to assist the reader with the terms used throughout the handbook.

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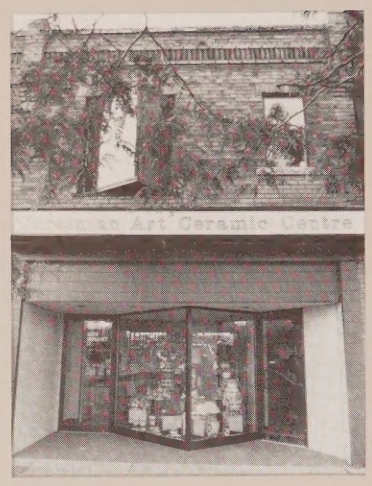


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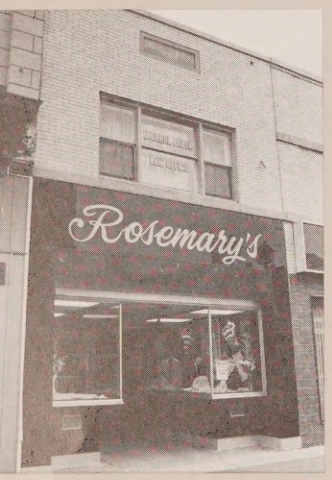

Rosemary's


COBOURG MEAT MARKET

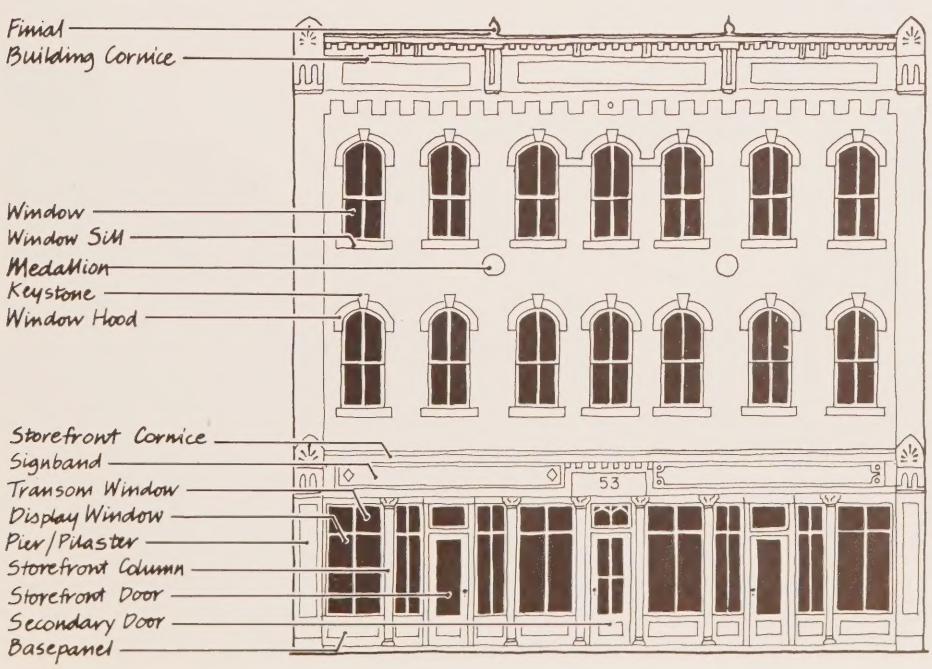
1. What's In a Facade

Every town, every commercial area and every building facade is different. Yet, a closer look reveals that the facades of Ontario's commercial areas are made up of a limited range of components and materials, organized and put together according to consistent design principles. Knowing this permits a generalized understanding of how facades work, and eventually how they can be improved.

A commercial facade is usually comprised of three main parts: the base or storefront; the middle, which is called the upper facade; and the top, which appears as a cornice or, on occasion, as a pitched roof. There are some variations throughout Ontario, for example, with single-storey commercial buildings where the upper facade will be missing, or in some modern buildings, where there will be no true cornice or expression of the roofline.

The most common components and materials found on facades and where most variation occurs are:

- doors and windows and their respective parts: frames, sills, glazing bars. . .
- functional and decorative features: cresting, finials, dormers, roofs, building cornices, eaves and downspouts, louvres, medallions, keystones, window hoods, lintels, panels, banding, first floor cornices, colonnades, porches, ballustrades, steps, chimneys. . .
- the wall and its materials: stone, brick, wood siding, metal siding, terracotta, marble, porcelain enamel, glass veneer, stucco, paint, etc.



Parts of a Facade

Hand in hand with the importance of these various parts and materials, there are three key relationships which contribute to the overall physical shape and quality of a commercial area. First of all, there is **siting**: the distance of the building from the street or sidewalk and from its neighbours; secondly, **form**: the building's height and width in relation to the width of the street, along with the roofline; and finally, there is the size, location, alignment and repetition of the building's **parts** (such as windows and lintels).

The human scale and proportions of repeating upper storey windows are among the most important assets of the traditional commercial street (Port Hope).

Siting

Commercial streets work best when everything on the street is of a human scale, and oriented to pedestrians. Even the way cars are usually allowed to park, parallel to the curb, places them in a position where they protect the pedestrian-zoned sidewalk from the busier road traffic. But the clearest physical manifestation of this importance of the pedestrian and human scale is the tight connection between the various buildings and between their facades and the sidewalks.

The continuity of storefronts and upper facades creates a spatial quality to commercial streets which is quite different (in North America at least) to other streets in the surrounding community. The faces of these blocks are not only more solid and compact, they are more consistent in height and they line both sides of the street. In a sense, the buildings become outdoor walls and the streets become outdoor rooms.

The traditional commercial street is compact and contained, supporting a pedestrian-oriented area (Kirkland Lake).

Occasionally older houses are still found on the streets of traditional commercial areas. Many of these buildings have been converted to commercial use, but retain their residential character. Their existence is usually quite appropriate. Although these buildings may not maintain the continuity of display windows (if set back behind a front lawn), or the compactness and containment of the street, they are usually very supportive of human scale and the pedestrian. If they are finely detailed and well maintained, they also show evidence of civic pride.

Older houses, often reminders of a community's heritage, support the human scale and vitality of the commercial street (Chatham).

Buildings or vacant lots whose physical characteristics disrupt the street, can be adapted for a better fit in many creative ways, such as by "infill" development, fencing or hedges on the edge of the private property, or through landscaping and lighting improvements to the adjacent public areas.

Form

Independently-owned facades placed side-by-side along the street create blocks of a very special nature. Through the use of building height, architectural styles and materials, the owners express their individuality and their competitiveness. At the same time, often as a result of standard building techniques and tradition, the building components are usually located and proportioned to work together with their neighbours to form a cohesive whole. Thus, together, different buildings incorporate similar patterns and rhythms, creating an important sense of unity and cooperation.

Buildings along the commercial street retain their individuality, but also work together to create a sense of unity (Brockville).

The Parts

An important vehicle for both a merchant's civic pride and his personal aspirations is the facade of his commercial building. A successful merchant understands the importance his building facade plays in creating a positive "first impression", of both his store and his community. As a result, facades tend to be far more elaborate and use better quality materials relative to both the buildings behind them and to other buildings in the community. This expression of personal and civic pride is most clearly demonstrated in the simple, but clean, detailing of the wooden "false fronts" of boomtowns and the cast-iron, brick and stone facades in the major urban centres of Ontario.

Pride may translate into facades of exceptional quality, often more elaborate than the buildings behind them (Stratford).

Following on from these three key relationships for buildings in commercial areas, there are some important physical and visual characteristics which a facade should display. They are set out in the box on this page.

The Six Characteristics of a Good Facade:

1. A good commercial facade is closely joined and aligned with its neighbours to create a sense of containment to the street—it forms part of the outdoor "wall" to the outdoor "room" of the street.

2. A good commercial facade expresses individuality, as well as unity, when it is part of an identifiable commercial area.

3. A good commercial facade supports sidewalk activities, such as window shopping and walking.

4. A good commercial facade expresses a mix of uses—public at grade, more private above.

5. A good commercial facade is well proportioned, of human scale, and oriented to the pedestrian.

6. A good commercial facade is composed of materials of enduring quality and fine detailing.

More than a Shopping Area

Commercial areas have always been, and still are, the major social and business centres for their communities. A full range of buildings from firehalls and libraries to houses can be found there and these all contribute to the area's diversity and uniqueness. Underlining this is the significance of the pedestrian and his relationship to the street and the buildings that line it. It is, as a result, important to keep in mind that the primary function of these buildings is to support the various activities which take place there.

Secondary uses on the upper floors support the vitality and mix of the street (Toronto).

Window shopping, for instance, is not only supported, but invited by the physical features of the street. The many shop windows, side by side, form a continuous display case along the street. Awnings, recessed entries and continuous, generous sidewalks also encourage window shopping.

The vitality of commercial areas is also supported by floors above the storefronts, allowing for the accommodation of new and different secondary uses. Doors that access these floors, when located on the street (as opposed to the lane at the back) make this space more attractive.

In essence, the commercial centres of communities not only capture a wide range of activities, they also reflect the history of that urban area and the importance of commerce over time. Many of the principles behind the siting of buildings and the architectural detailing, such as the use of recessed entries, remain valid and applicable to today's commercial facades. The storefront, with its carefully defined window display areas, was a feature of Ontario's commercial and social centres a century ago; it serves the same purpose today.

Common Styles of Commercial Architecture in Ontario

The streets of Ontario's traditional commercial areas are lined with a variety of architectural styles ranging from past to present. While the basic organization of these facades has remained constant, the way in which the parts (storefront, upper facade, roofline) are expressed has changed with each new generation of store owners and merchants. The pattern that has resulted is one of facades similar in basic organization, but richly varied and different in detail. This pattern adds significantly to both the unity and diversity of the street.

The variety of architectural styles in these commercial areas offers another valuable resource. The various periods of economic expansion experienced by a community are often expressed by the physical characteristics of its commercial facades. Many commercial buildings were built on the same blocks at roughly the same time and there is frequently a predominance of one or more styles in any given block or section of a commercial area. As a result, a commercial area's facades provide a valuable and irreplaceable cross-section of their community's history.

Georgian facades in Merrickville (right, lower left and right).

Edwardian facades in North Bay (bottom, left to right).

Each community has its own unique history; many communities and neighbourhoods were established and grew slowly or more dramatically at different times. Consequently, the types and range of styles that appear help to define a specific community's image both in time and place. The different "look" of towns and cities across Ontario is a natural result. Such patterns should be respected and reinforced.

The styles most commonly found in the Province's commercial areas are presented on the following pages together with the periods of commercial development in which they first appeared. Within most styles it is possible to identify many variations sugggesting the existence of not one, but in fact a number of styles. While these variations can often be important, for the purposes of this handbook a more generalized understanding of styles is presented as a more immediately useful and simple tool for facade improvements. The information presented can also be used as a starting point for further investigations and a more detailed understanding if desired.

The information here will assist the property owner to see how his building relates to others along the street, for instance, by enabling him to pick out buildings of a similar period and style. It should be noted that at times the style seen in the upper facade is not the same as the storefront, since improvements to the storefront may have been made after the building was constructed.

The brief historical background and period identification will provide an opportunity to understand the whole streetscape (buildings, sidewalk, roadway) as it has evolved. The basic relationships of siting, form and building parts which are the essential heritage of the commercial area should become evident and provide clues to effective and coordinated facade improvements throughout the commercial area.

By recognizing the characteristic features, such as window size and detailing, along with the common materials used, the owner will be able to develop an improvement program for his building which uses to the best effect his existing physical resources and, at the same time, respects his immediate neighbours. The Local Architectural Conservation Advisory Committee (LACAC) will also be helpful in this task.

Art Deco facades in Kirkland Lake (upper and lower).

Agrarian Prosperity: 1785-c1830

The first shops in Ontario looked like and were built in the same wood, brick or stone as the neighbouring **Georgian** style houses. In most cases the same craftsmen were used, though the detail at times was a little more elaborate. Trim, window frames, doors and most other features— including paint colours —were also the same as those used in houses built at the same time.

The storefront itself, particularly after the War of 1812, stood out as a separate element, inserted into the facade design, often with the gable facing the street. Framed with piers and a crossbeam or cornice in wood, the display windows were designed either as bays or flat panels and were arranged in pairs or singly on either side of a door. Many shops also had roofs or awnings in wood in front that extended out over a section of wooden or stone sidewalk that the merchant maintained for the convenience of his customers.

Signage most often included the firm's name, but sometimes a symbol like a horseshoe, a lock, a hat or a barberpole were placed in the cornice over the window or door, or painted on the glass of the window. Small, hanging wood signs were also used, projecting out above the door.

Georgian facades in Niagara-on-the-Lake (upper r), Elora (lower r) and Sparta (l). This style typically has a gabled roof, multi-paned windows and occasionally louvered shutters. Wood, stone or brick were used in very simple facades. In masonry buildings firewalls and chimneys often project above the roofline.

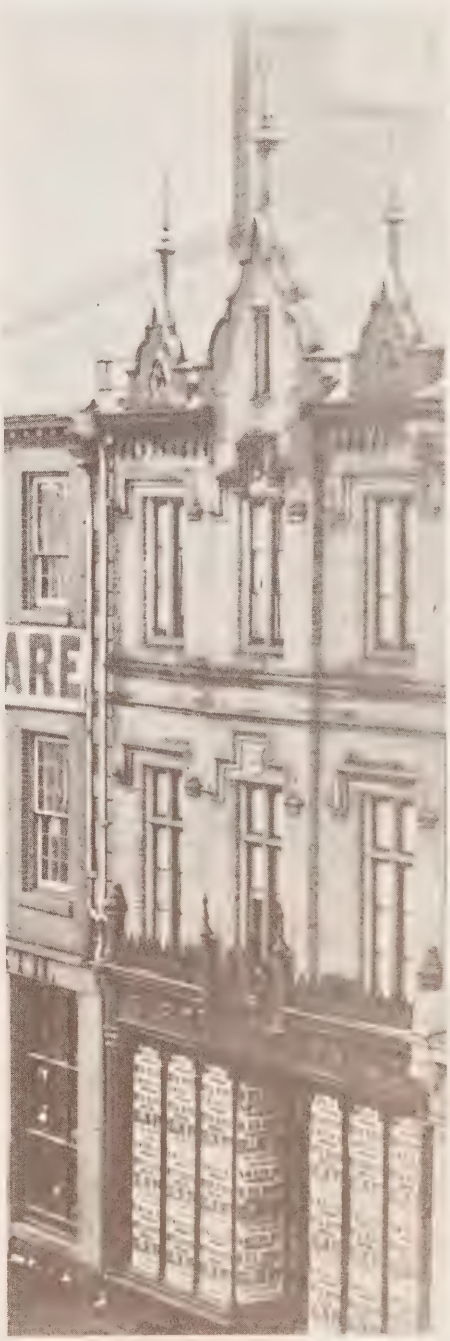
Pre-Confederation: 1830-c1855

In the 1830's and later, stores became larger and were frequently built in groups. They were two-, three- and very occasionally four-storeys high—connected as pairs, threes or sometimes in rows using stone and brick. Most stores, like most of the other buildings, were **Georgian** in style, although occasional buildings in the **Gothic** style were built. As in the earlier period most of the details other than those of the storefront, including paint colours, were no different than those used in residential architecture of the period.

During this period, storefronts also became a more important part of commercial architecture, incorporating increasingly larger panes of glass. They were often far more elaborate than the rest of the building. Some of the prominence which is associated with modern commercial design began to appear, but there was still an overall balance between the shop itself and the upper floors of the building.

Though commercial architecture was becoming more elaborate, the technology and forms of signage were not very different from what had been used before. Signs were larger. Whole buildings were sometimes painted as signs, and red stores, blue stores or checkered stores could be found across Ontario.

The Georgian style developed into grander forms during this period, using pilasters in the upper facades, pediments in the roof-lines and larger cornices along with more expansive display windows in the storefronts (Port Hope, l). Gothic styles are usually very decorative, often using spires and trefoils in the cornices and atop steep gables with curves and angles. Pointed and multi-paned windows are also common (Toronto, r).



Railway Era: 1855-1886

The railway era produced the most elaborate and varied commercial architecture of any period in Ontario's history. Virtually every style found in churches, houses or public buildings can be found in shops and commercial buildings: **Second Empire, Italianate, Gothic or Romanesque**. There were pattern books available from the United States to guide architects and builders and catalogues provided cast iron, pressed metal, brick and terracotta ornaments for window frames, cornices, storefronts and interiors of the buildings. Local materials were still important, such as the grey stone used in St. Mary's, Perth, Belleville and Kingston.

Within this period, storefronts became even larger than before, although they shared their prominence with the rest of the building facade. Large sheets of plate glass became basic to shop design and sometimes the fronts rose a full two storeys, framed in cast iron, bronze or brass, becoming more dramatic. There was also considerable modernization of storefronts in this period.

While storefronts were increasing in size and ornamentation, the technology of signage was also beginning to change, primarily by the addition of light as a factor in design. The use of gas jets in globes or panels of coloured glass not only made the shops more noticeable, but became a major factor in the image of downtown as a special place, and the centrepiece of any community of size and distinction.

This jewellery store, in the Italianate style, was built with a tower and public clock (St. Mary's).

This Gothic style building was built with shops on the ground floor and a theatre above (St. Mary's).

The Italianate style is characterized by projecting cornices and arched windows with rich detailing. Walls were frequently brick or stuccoed, but decorative features were made from wood, stone, cast iron, pressed metal or, often, corbelled brick (Goderich, l, and Ottawa, r).

The Second Empire style is most distinguishable by its sloping mansard roof, often using various tones of slate shingles, cresting and dormers. Paired windows, boldly decorated lintels and window hoods are also common characteristics (Fergus, upper l, Toronto, l, and Toronto, r).

Late Victorian and Edwardian Prosperity: 1886-1914

The commercial buildings of the Late Victorian and Edwardian periods did not change dramatically in size or scale, although a number of large department stores were built in towns, such as Niagara Falls and Kitchener during this period. Brick with trim in a wide variety of other materials was the most common material. The most notable changes are in style which followed fashion in other areas and the **Queen Anne** style quickly replaced **Second Empire** and **Italianate** styles. At the same time, more subdued **Romanesque** and **Edwardian** styles, in which there was far less window and cornice ornamentation, became popular. In smaller towns, particularly those that were newly prosperous or developing, the one storey building with a high false front, or boomtown front, was common.

Storefronts became larger than before with great expanses of plate glass. Panels of new glazing materials, like Luxfer prisms, were placed in transoms to diffuse and spread the light as it entered the shop. These new storefronts were often much simpler in design than their predecessors. Most of the work of attracting customers was taken over by electric light in the display windows.

Queen Anne architecture was very flamboyant and borrowed from many different styles. A common feature was the multi-paned windows, filling entire bays in the facade. The cornices were less heavy and oriel windows (not shown) were popular. Many different colours and materials were used (Toronto, r, and London, below).

This building, though altered, maintains many of the characteristics of the Romanesque style: massive arches over windows and deeply recessed doors. The walls were always red brick or sandstone, roughly hewn, massive and heavy (St. Thomas, opp.).

While similar to the Queen Anne style (multi-paned transoms and oriel windows), Edwardian buildings were heavier and more monumental, mostly built of red brick, with quoins, horizontal stripes or highlights (diamonds, squares, crosses etc.) in contrasting light-coloured stone (Kenora, opp., St. Mary's, below l).

Boomtown fronts were simplified forms of Edwardian architecture (Kirkland Lake, r).

Between the Wars: 1919-39

The large chain stores were the most important patrons of new architecture in this period, introducing **Art Deco** and **Style Moderne**. Many storefronts were remodelled to give old and new businesses a similar, stylish image. The **Art Deco** style, with its simplified angular patterns and classical and floral details, and **Style Moderne**, with its long horizontal lines, wide and almost undivided display windows, sleek surfaces and low profiles, sometimes broken by strong vertical signs, dominated the period. **Modern Brick Vernacular**, a simple and economical decorative technique (sometimes called Tapestry Brick) was another common commercial style which developed in this period. Styles from the previous period, especially **Edwardian**, continued to be used as well. In northern Ontario, while many buildings used styles and materials current at the time, even more used styles, materials and building forms seen much earlier in the older parts of the Province.

In this period there were few technological changes, although efficient coloured neon lighting opened a new range of possibilities in signage, and some new materials, like structural glass veneer and aluminum, were introduced. Structural glass veneer in particular, which was available in many colours and finishes, was exploited as a symbol of modernity in new and renovated facades. It was used along with light coloured brick, polished aluminum and terra cotta, glazed in both pastels and vibrant solid tones. These materials were rarely used elsewhere in the architecture of the time.

Many chain stores built between the Wars used Style Moderne, characterized by flat walls frequently constructed out of yellow brick, stucco, porcelain steel panels or glazed terra cotta. Strong horizontal decoration was often applied in contrasting brick, stone or structural glass veneer. Large, undivided display windows and, awnings or flat canopies were common (Goderich, l, and Kirkland Lake, r).

The Art Deco style is similar to Style Moderne, but with the emphasis on vertical lines. Decorative banding and bas-relief panels using geometric patterns (based on classical and floral motifs) highlight flat walls. Windows with thin metal frames were common (Stratford).

Modern Brick Vernacular (or Tapestry Brick) was a common commercial style in the first half of this century. Textured brick, in a variety of colours, types and configurations, were used on flat walls with flat-topped window openings. Panel-like designs, above or beside windows, along with diamond-shaped inlays and stepped parapet walls were typical (Chatham upper and lower I).

Throughout the province, and especially in the north, more simplified Edwardian styles continued to be used. The strong, plain cornice and leaded transom windows are key features in this example (Cobalt).

1950-Present

Since the Second World War there has been no consensus about the best image or form for commercial areas. On established streets, redesigning existing storefronts was the principal activity, and **Fifties Modern** was the most popular and striking style used in these redesigns. However, unlike in the past, some new styles and materials were not consistently applied to basic facade components and often ignored or obliterated the established patterns of the commercial street.

When designing signs and display windows, most stores paid little attention to their neighbours and even less to the buildings in which they stood. In many cases the signs were inflated to cover the entire height of a building, in the hope of modernizing it. From the late 1960s, historical styles and occasionally restoration became a part of the changing scene.

Today's commercial facades are being affected by changing technological capabilities and social values no less than those of previous periods. While it is too early to easily typify developing styles, the trend is often to fit new designs with the existing historical/regional context, frequently using variations of previous styles, eliminate updated with new materials and techniques. As a result, this trend is often referred to as either **Free Style** or **Post-Modern**.

Fifties Modern style was used extensively in new and redesigned storefronts. Materials included structural glass veneer or porcelain steel panels in simple bold designs. New display techniques and the latest in lettering styles were employed (North Bay, upper and Stratford, lower).

Many existing facades were redesigned or covered over with cladding and super-scale signage. Although not a style, this type of facade treatment became popular in the fifties and continues today (Cochrane, l, and London, r).

Today's commercial facades are often fitted with new designs reflecting the immediate historical or regional context, or using a minimalist approach (Stratford, l, Toronto, upper and lower).

The knowledge of a building's history and its place in relation to other buildings in the commercial area is important information for the property owner. It can help him or her focus on appropriate or inappropriate details; it can help in the selection of materials or colours, and it can help in choosing the overall approach he is going to take to facade improvement. In the next chapter guidance is given to the property owner on priorities for (where to begin) and approaches to (what needs to be done) facade improvement.

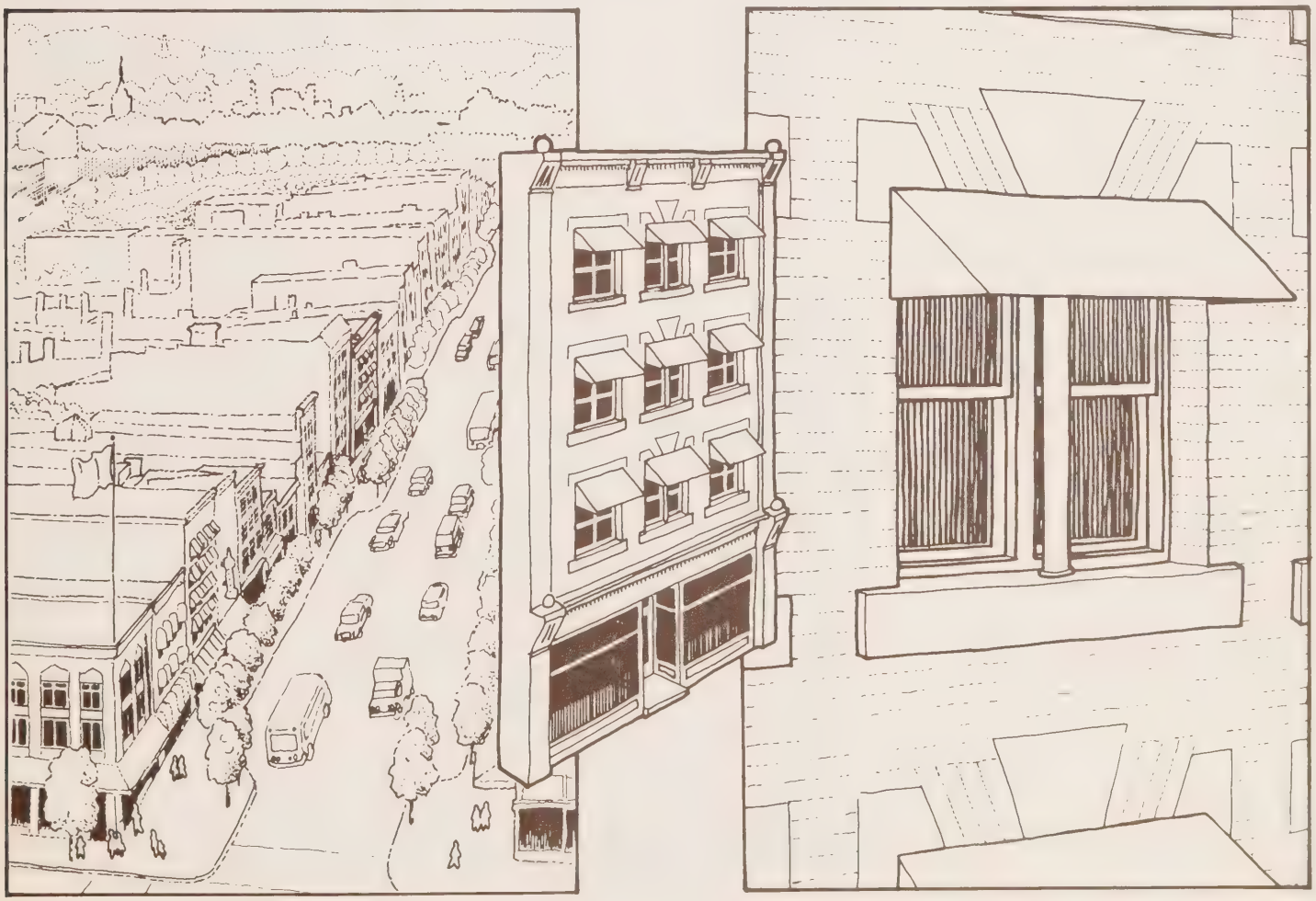

ALEXANDER
COTTAGES FOR SALE
May's
Garb & Gear
SPORT SHOP

2. Priorities and Approaches

In order to understand a facade, one needs both to step back and to zero-in. It is necessary to step back to understand the larger system in which facades play a key role: the commercial area as a whole. On the other hand, it is necessary to zero-in to understand the various components and materials that make up a commercial facade. Every facade on every street in every commercial area is a part of a larger system and, at the same time, is itself a system with its own parts. To step back and zero-in is useful because the various parts and systems help to define each other, and as discussed in relation to a building's history, create the characteristic streets, facades and features of commercial areas.

An overview is also useful so that priorities may be established and a comprehensive strategy for the facade can be decided upon. Any improvements should be part of an overall strategy for the facade and building, and if possible related to planned improvements to other buildings and the public area. Improvements or repairs implemented in a piece-meal fashion often create new problems. For instance, signs are sometimes quickly purchased and installed for immediate effect with little thought to the most ap-

To understand a facade, it is necessary to step back and zero in.



propriate long term location, type and size. If deteriorating building parts are concealed behind these signs this may lead to further, and larger, problems as the deterioration continues unchecked.

The owner will want to determine the overall improvement approach to be taken: redesign, restoration, renovation, or simple maintenance, but before doing so he will want to assign priorities to the total range of work which may be required to keep his building safe and sound, as well as aesthetically improve it. If the municipality has undertaken a commercial facade study, the property owner may also want to refer to it at this stage for direction in setting priorities.

Priorities

The building should first be brought up to minimum life safety standards and made structurally stable if necessary. Other improvements can then be made to the building and its facade. More often than not, however, life safety, stabilization and improvement work are done simultaneously. This provides the greatest opportunity for a properly coordinated facade and saves considerable time and money in the long term. In addressing these priority matters the advice of a professional, such as an architect, engineer, and/or the local fire chief and building inspector is recommended. In certain circumstances, the involvement of an architect or engineer may be required by the Ontario Building or Fire Codes. For example, renovation involving material alteration to commercial buildings exceeding 600 square metres in gross area or 3 storeys in height, require design and general construction review by an architect and professional engineer.

Fire, Life and Safety

Not only can a fire damage or totally destroy inventory and other investments (including building improvements), it can also cause death. Obviously it is a first priority that a building be designed and maintained to prevent fire from defective electrical and heating systems, as well as the storage of hazardous and/or flammable materials.

Minimum standards which must be met are set out in the Ontario Building Code (OBC) for new construction and renovation, and in the Ontario Fire Code (OFC)* for required upgrading. The regulations of the OBC and the OFC concern fire safety features, such as wall and ceiling finishes, fire separations, firewalls (within a building, and between a building and neighbouring buildings), sprinkler systems, fire alarm and detection systems, fire department access, exit stairs, emergency lighting and exit doors. In addition to these provincial codes, many municipalities have property standards by-laws (or Maintenance and Occupancy By-laws) in force which regulate the repair and maintenance of existing buildings. Local by-laws should be checked in case the building is affected and additional work is required to bring it up to these standards.

Structural Stabilization

The avoidance of structural collapse has equal priority. Any structural damage, such as foundation problems, termites, dry rot or rust in posts or beams, must be repaired. Hairline cracks in localized areas of the facade walls, especially masonry surfaces, indicate minor structural settling. The crack should be immediately cleaned and repaired. If complete stabilization of a structure is required, it may be undertaken immediately or it may take the form of interim measures allowing for more complete reconstruction at a later date when other major renovation work will be done. To establish a good long-term plan for the improvement of a facade, it is necessary to understand which functions and parts of the building and its facade are most important.

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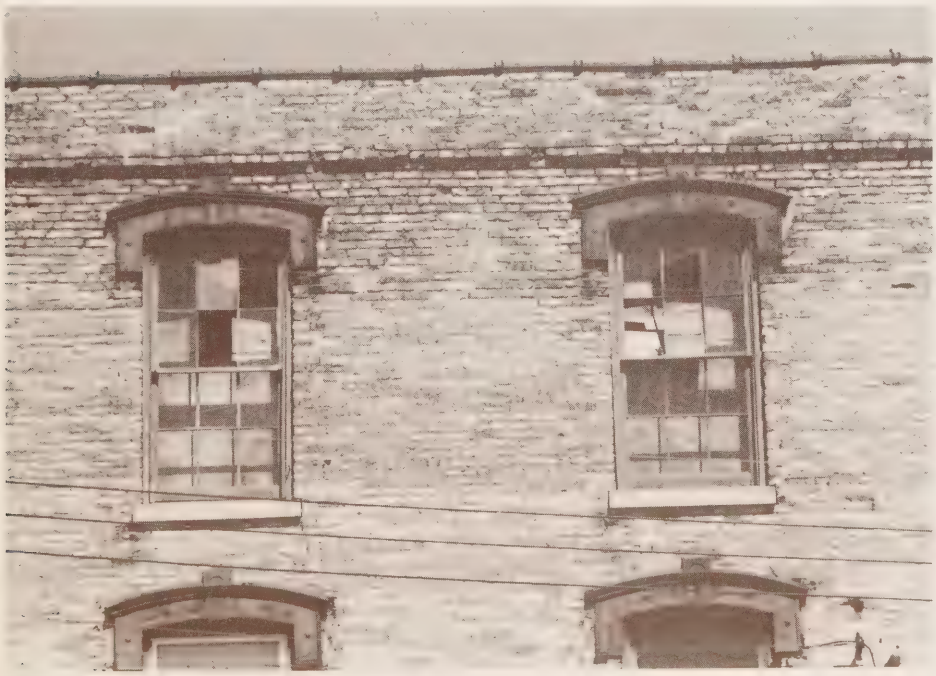
*"Firecode Retrofit", Part 9 of the Firecode, under the Fire Marshall's Act, regulates "existing buildings". Requirements covering "Boarding, Lodging, Rooming Houses" and "Assembly Occupancies" are now in force; other occupancies will be covered in the future.

Cracks in brickwork are signs of structural problems and require immediate attention.

Weatherproofing

Buildings are often damaged by the presence of unwanted water in the building structure and its finishes. This results from either condensation of water vapour found where the warm, moist interior air of buildings meets cold surfaces (usually insufficiently insulated surfaces such as exterior walls or plumbing), or water leaking in from the outside (rain, melting snow, ground water, etc.) All roofs, eavestroughs, wall coping, flashings, cladding, sheathing, masonry, paint, windows and drainage should be kept in good condition and properly maintained. Water penetration, through broken or otherwise damaged windows, especially in the upper facade, is an obvious, but often neglected problem requiring immediate attention.

Here as elsewhere, prevention is much cheaper than repair or reconstruction. Particular attention should be given to the exterior building walls. This is often a structural concern as well, since a deteriorating "skin"—like brick—can quite literally fall apart if left unattended.



Broken windows are not only unsightly, but also may lead to serious damage of the building wall if not repaired quickly to maintain a weather-proof seal.

Building Services

It is important to upgrade old or deteriorated electrical and plumbing systems. Pipes, fittings and fixtures should be kept in good condition to prevent damage resulting from leaks or bursting. Particular attention should be given to pipes located close to, or in exterior walls, as cold winters can make even new pipes burst. Introducing or increasing wall and/or pipe insulation should be considered. Pipe insulation should also be considered for cold water pipes to reduce potential problems resulting from condensation. Finally, pipes with potential problems should never be concealed behind new or renovated walls.

Improving Visual Qualities and Amenities

After considerations of life safety and building stabilization have been addressed, the next step is to improve the important qualities and amenities that make the building facade visually unique.

Where limited budgets do not allow for comprehensive improvements, the following list of general improvement priorities may be helpful:

- improvements to restore the storefront portion of the facade should take precedence over other cosmetic improvements;
- removal of large projecting signs and other extraneous surface signs should take precedence over improvements to upper storeys;
- cleaning and repainting the upper storey windows should take precedence over other improvements to upper storeys;
- cleaning and repainting the upper storey windows' decorative features, especially cornices, should take precedence over repainting or cleaning upper storey walls.

The determination of priorities, along with the property owner's budget for facade improvements, will help to establish the overall approach or strategy regarding the improvements. There are three general approaches to improvement that a property owner might consider: **redesign, restoration** or **renovation**.

Effective redesign respects the building's context by maintaining characteristic height, width and setbacks in the area, and by respecting the architectural styles of neighbouring buildings. In this case, the cornice, recessed doorway, signboard and large display window are features that are repeated in new materials (Toronto).

Redesign

Redesign is usually the least appropriate choice of the three options, since it requires the complete reconstruction of the facade. The intent is often to obtain an unusual new image, such as an exotic or antique exterior. The greatest difficulty with this approach involves the inherent inability of these unusual images to properly relate with the other facades of the area. Often deteriorating facade materials are covered over and this may lead to more serious problems in the future. The weight of the new construction layer may also add its own problems.

While redesign may be used to improve an existing but poorly designed facade, the approach demands good design advice and quite often the extensive use of contractors. By its very nature, redesign requires a skilled, professional hand sensitive to the specific needs of facades in traditional commercial areas. The scale and complexity of construction also precludes "do-ityourself" work.

Two examples of redesigned facades, which illustrate that recladding materials often require more maintenance than the original facade.

Restoration

Restoration is at the other end of the improvement spectrum: an existing facade's appearance is restored to a particular point in history (usually the time when it was first built). While the work may be extensive and require a considerable amount of time, it is the best approach for historically significant facades. If a building or a facade is officially designated as an historically or architecturally significant facade under the Ontario Heritage Act (See Chapter 6), it may be the only possible approach.

Restoration often requires extensive research material related to the specific building and demands the use of original forms, colour, authentic materials or closest possible replicas. Consequently, this may also be the most expensive approach for an owner to take. As a result, this approach, until recently, has been largely restricted to structures of significant heritage value. It is now gaining ground for more modest buildings as well, when there is an outstanding and attractive result.

Restoration is the approach used to improve historically or architecturally significant facades (Victoria Harbour).

Renovation

Renovation of a facade ensures that the original elements of the building and its neighbours are maintained and accentuated, as in the case of the building on the right (Stratford).

Renovation allows for the phased implementation of improvements. As illustrated in the photo below, the upper facade windows still remain blocked but the overall facade is not disrupted (Chatham).

Renovation is probably the most practical solution for most building owners. It entails the refurbishing and repair of a facade to bring back its original strengths and design. Since many facades work well, they do not need to be entirely modified. Frequently all that is required is a careful repainting, the removal of a poorly designed sign or the repair of a cornice. The renovation approach is also the best for staged improvements.

This approach incorporates many of the best aspects of the other two strategies. Original elements that enhance the building are maintained and accentuated. However, complete historical accuracy is unnecessary. Renovation does not demand the removal of all the additions incorporated over the years; it recognizes that good design from all periods can and should be maintained. The approach is reasonably flexible, allowing for new elements and contemporary solutions, provided they contribute to the important qualities of facades for commercial areas.

In comparison to the other approaches, renovation can be relatively inexpensive. At times, a simple clean-up is all that is needed. Expensive stripping-off, or adding on, is minimized, since the existing facade often serves as the basis for improvement.

Renovation can be relatively inexpensive. The addition of cladding is usually unnecessary and sometimes out of keeping with the materials used elsewhere along the commercial street (New Liskeard).

Costs

The cost of any improvement is always a concern. The experience of many businessmen is that facade improvement expenditures increase profit in a general way by increasing the competitive edge of the business. Calculating pay-back periods or cost/benefit, however, depends on so many intuitive assumptions that it becomes a very personal decision. Yet it is clearly to the best interest of both the individual and the community whenever an affirmative decision is made. Even the costs are difficult to generalize: different buildings and different budgets require different types of improvements. All buildings need regular expenditures for maintenance.

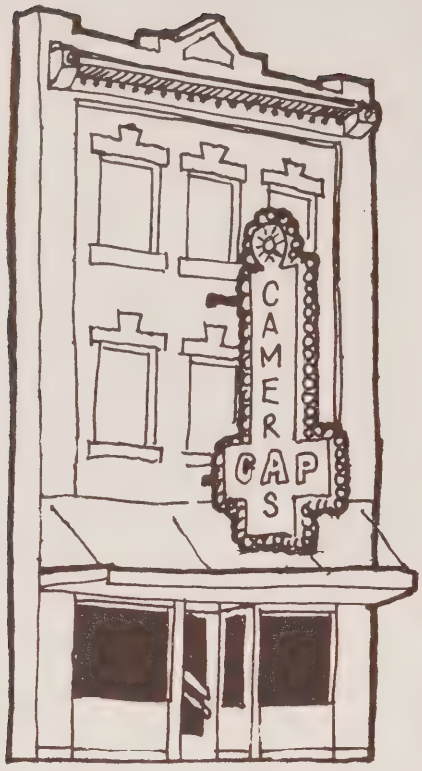
For those facades requiring extensive work, all improvements do not need to happen at once, although cost savings generally are realized from a comprehensive job carried out at one time. Similarily, a coordinated effort among a number of stores in a building or, if possible, among a number of different buildings also results in savings.

The costs set out here are only estimates based on 1985 dollars. Costs will vary with time, scheduling, type and quantity of work, materials and the accessibility of the work. Costs may also vary from region to region in the Province.

The estimates are based on improvements to a facade, as illustrated, which is 5.5m (18 ft) wide and three storeys high. It is assumed that standard quality materials and products would be used. Chapter 4, on materials and maintenance, gives the reader a general indication of the cost of using various materials.

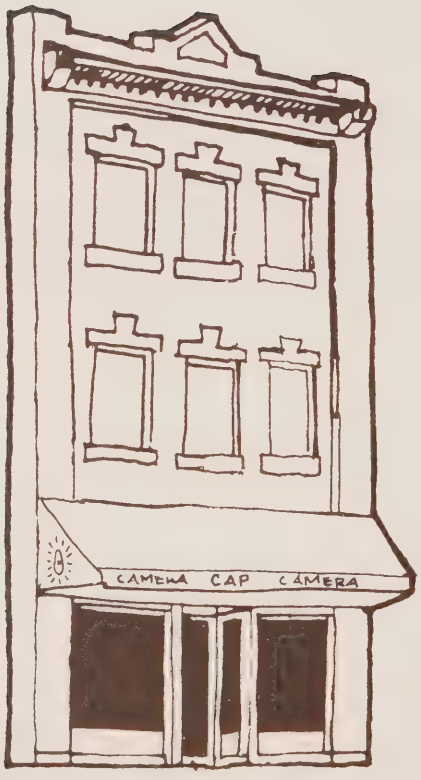
Four possible facade improvement scenarios are illustrated and their costs itemized, all reflect the priorities discussed earlier in this handbook. All assume any necessary work related to upgrading fire and life safety would be in addition to this work. The structural upgrading, indicated on the diagram would require minor repointing. Repairs to a damaged cornice and its flashing present the only major weatherproofing. All removal work includes costs for any moderate patching that may be required.

The most commonly employed approach to facade improvement is likely to be minimal renovation. This would involve repainting, new display windows, new doors, repair of the building cornice, removal of a projecting sign and installation of a fixed awning over the existing canopy. The property owner would achieve considerable visual improvement with these changes alone and there is the opportunity to coordinate even these minimal changes with adjacent owners to heighten the impact and possibly reduce costs.



Clean-up

Repainting and repointing (storefront and upper facade)	$ 800–1000
New glass in enlarged display window (base-panels remain—but are repainted)	300– 600
Cornice repair	600– 900
	$1700–2500

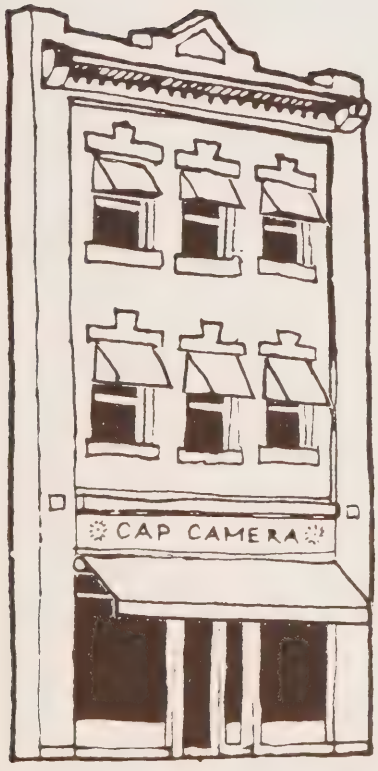


Minimal Renovation

Repainting and repointing (storefront and upper facade)	$ 800– 1000
New display windows, doors and recessed entry ceiling	5000– 7500
Cornice repair	600– 900
Removal of projecting sign	200– 400
New fixed awning over existing canopy with adjustments	900– 1700
	$7500–11500

Moderate Renovation

Repainting and repointing (storefront and upper facade)	$ 800– 1000
New display windows, doors, transoms and recessed entry ceiling	6000– 8500
Cornice repair	600– 900
Removal of projecting sign	200– 400
Removal of canopy	400– 700
Removal of storefront cladding and repairs to piers etc.	300– 500
New signboard with external lighting	1000– 1500
Replacing missing windows	2200– 3000
	$11500–16500



Major Renovation

(All items as in Moderate Renovation with following additional items)

New paving to recessed entry floor	$ 300– 600
New operable storefront awning	1800– 2300
New fixed upper facade awnings	1900– 2600
	$15500–22000


TRAVEL

3. Improvement Guidelines

A facade should perform social, visual and spatial functions, while simultaneously working with, rather than against, the important and positive qualities of the commercial area. These guidelines recognize, first of all, that the heritage of a building facade is an important building block in the improvement process and, secondly, that there are different approaches to improvement: redesign, renovation and restoration. Based on these considerations, the guidelines deal with the design and improvement of specific parts of the facade (from base panels to cornices), along with guidelines on the form and siting of the whole building.

The guidelines are arranged, as far as possible, in order of priority, assuming that the fundamental considerations to make the property safe and sound have been attended to first. Guidelines are provided on:

- siting
- form
- facade division
- storefront
- basepanels
- display windows
- transom windows
- storefront entries
- exterior floors and steps
- storefront columns
- storefront doors
- secondary doors
- signboards and signage
- storefront cornice
- piers and pilasters
- upper facade
- building cornice/roof
- colour

Improvements to these specific building parts should be guided by four main principles:

- *Maintain* original facade components and materials wherever possible. If components are damaged, repair is visually and economically preferable to replacement.

- If replacement is required, *replicate* original parts and materials.

- If replication is not possible, *substitute* with materials similar to the colour, texture, dimensions, proportion and design of the original.

- If major work like expansion or subdivision is to be done, do not irrevocably change the original building(s). Leave as much of the original as possible, working around it rather than removing it. This will also leave more options open in the future. If new materials and parts are to be used in expansion, they should be as similar as possible to the other materials and architectural style of the original facade.

Siting

- *Maintain the relationship of a building to the street and a building to its neighbours common in the area.*

The relationship of a building to the street and its neighbours may vary from area to area, but it most often does not vary within any one given area. The established pattern and goal of facade improvement should be a consistent street frontage with a chain of facades creating the highly recognizable space of a traditional commercial area.

The introduction of forms of commercial development which do not represent the principle of continuity (such as a free-standing building set back behind front-lot parking) has proven to be unsatisfactory on many counts. Their large site requirements upset the essential compact character of traditional commercial areas. They often create obstructions to pedestrian walkways by their need for automobile and truck access. Car dealers, drive-in food outlets, convenience stores and, front-lot parking and service stations are some examples of inappropriate building types for these commercial areas. While the physical characteristics of a larger and properly functioning commercial street are usually sufficiently strong to deal with one or two such intrusions, they should not be encouraged because they disrupt the vital social activities and physical organization of traditional commercial areas.

Two typical examples of buildings set back from the sidewalk, permitting front yard parking, but disrupting the continuity of the street.

Form

- *Maintain basic height and width of storefronts prevalent in the area.*
- *Maintain any special "block" forms, such as taller central or corner buildings.*
- *Maintain consistent building heights in cases where such consistency already exists.*
- *Maintain any special forms, such as towers or turrets.*
- *Maintain the pattern established by repeating building and lot widths prevalent in the area.*
- *Maintain floor-to-ceiling heights prevalent in the area.*

Typically building heights and widths are not as regular as the other patterns of the facade. However, similarities in original lot sizes, as well as standard floor-to-ceiling heights often exist in commercial areas. Generally, the height of the storefront is the most common element repeated throughout the commercial area.

On the left, there are five different buildings, three different lot widths, but continuity is maintained with the same building height and repetition of building features (London). The two buildings at either end of this block, in Goderich, frame and terminate the block (right).

Sometimes commercial streets do have a consistent building height, creating a powerful and unique street "wall". Very often important public spaces in commercial areas, such as some traditional market squares and parks, rely on this consistency of building height at their edges to define and contain the space. Building height is important and uniformity should be maintained wherever possible.

Occasionally all the buildings on an entire block were built at the same time or by the same developer. In these circumstances, special "blocks" were sometimes created with either central buildings or corner buildings higher than the rest. Other unique features might also have been incorporated onto the facades, such as towers and turrets.

Facade Division

- *Maintain basic relationship of base, middle and top in the facade.*
- *Maintain balance between the two or three sections of facade.*

A typically well-designed facade, two storeys or more in height, is divided and organized into three sections: base, middle and top. These sections may vary in size relative to each other. However, the top is usually the smallest and, in three or more storey buildings, the middle (the upper facade) is the largest. A good facade maintains these sections in a proper balance, so that no one element is dominated by the others. Well-designed single storey buildings also have clearly defined tops.

The Storefront

- *Maintain alignment of storefront with neighbouring storefronts or with those prevalent on the street, especially in terms of overall height.*
- *Maintain the stronger horizontal lines as the primary feature and the less frequent vertical lines as secondary in the storefront.*
- *Maintain alignment of key vertical storefront parts (such as storefront entries, doors, piers and pilasters) with location of similar parts in the upper facade.*
- *Maintain horizontal division of base, middle and top in the storefront.*

The storefront is the single most important feature of the facade, visually and socially. In these terms, any storefront improvements should take precedence over other changes to the facade. A good storefront and its parts perform many functions simultaneously, such as:

- attracting attention,
- providing effective display spaces,
- inviting shoppers to enter,
- inviting window shopping,
- allowing natural light into the store,
- taking advantage of and enhancing the rest of the facade,
- taking advantage of and enhancing the rest of the street.

A storefront's ability to perform these functions is dependent on the character of the storefront's individual parts: basepanels, display windows, transom windows and so on, and how they are arranged. Like the overall facade, a good storefront has a uniform organization of base, middle and top. The strong horizontal lines established by many of the storefront parts (especially the basepanels, transom windows and storefront cornice) provide a clear anchor to the facade, visually connecting it to the sidewalk and ground. When considered with all the neighbouring storefronts, it also provides the most consistent line for visually linking the various facades of the street.

The horizontal alignment of storefronts is the most important unifying feature of the street (North Bay).

The vertical linkage of the storefront with the rest of the facade is also important. This linkage is most clearly established by the storefront entry, doors, piers, and pilasters. Basepanels, display and transom windows, awnings and storefront cornices are often divided by vertical elements and these, as well as signage location, also contribute to this pattern. Openings in the storefront (recessed entries, doors, display windows) should align with the windows of the upper facades. Structural supports in the storefront (columns, piers and pilasters) should also align with those above or should be located on the centre line between windows or at the edges of windows above.

Vertical alignment in the facade, while not as important as the horizontal alignment of storefronts, can result in more attractive facades.

An ideal fit can be achieved.

Not ideal, but reasonable.

A poor fit should be avoided.

Basepanel

- *Basepanel materials should be the same in colour and texture as the display window frame or the storefront pilaster materials.*

- *Maintain original basepanels, when possible.*

A basepanel, sometimes referred to as a bulkhead, establishes a visible anchor to the storefront at the important junction of building and ground. At the same time it acts as a sill for the display windows and it provides a simple method of elevating the display area to a more effective viewing height. Some contemporary storefronts extend the display windows virtually right to the ground. This can be attractive, but careful selection of frame and sill materials is even more important than usual, as is regular maintenance.

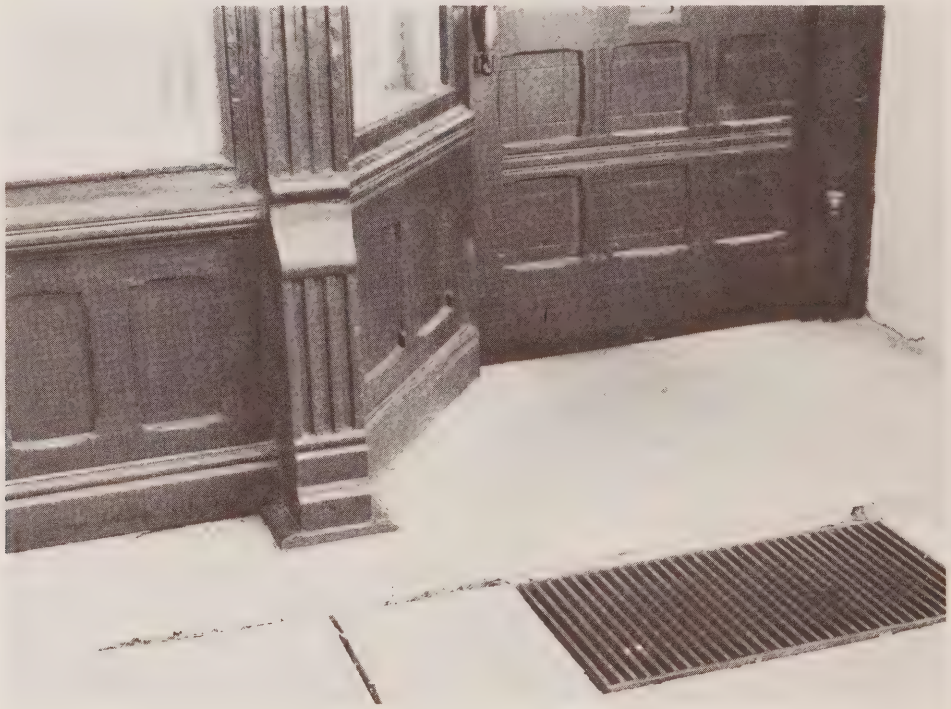
If the right materials are used and properly maintained, basepanels can considerably enhance the displays, the storefront and the entire facade. Properly treated and sealed wood has been used in this North Bay example.

Basepanels also act as kick plates, for this particularly vulnerable location. Materials selected for use in basepanels should fit in with the rest of the storefront and be durable. In terms of both fit and durability, the original basepanels (if they still exist) are usually the most practical. For durability poured-in-place concrete, pre-cast concrete, most masonry, marble, granite, structural glass veneer, composite metal panels and terrazzo are the best and require the least maintenance. Original cast-iron pieces are also very long-lasting, but require a little more maintenance due to the location at grade.

While basepanels provide the best protection for the storefront and can be effectively used for visual alignment, they are not essential (Toronto).

Ceramic and quarry tiles may also prove durable if the correct type is properly installed and maintained (not all ceramic and quarry tiles are made to withstand the demands of this type of application). If wood is used, it should be exterior grade and properly sealed for application in this vulnerable location. If not painted or otherwise sealed, all woods, including cedar, deteriorate quickly as a result of rain and snow accumulation. The salts and chemicals used on sidewalks in the winter either splash up or are absorbed into unprotected wood, also resulting in significant damage. Like wood, stucco is a reasonably durable material if properly installed and maintained. However, it can crack and is prone to deterioration from standing water and snow.

Steel, aluminum and vinyl siding present serious problems when used as basepanel materials. The factory-applied finishes of both types of metal siding fade and can be scratched, and repainting is difficult. Aluminum dents and also scratches very easily. While steel siding is stronger, it too can dent and like aluminum cannot be satisfactorily straightened. Steel siding is also prone to rusting in locations close to the ground, especially if its finish is scratched. Vinyl siding does not rust and is more flexible, but it can be torn and punctured.



In terms of fit and durability, the original basepanels are usually the most practical and most economical to repair (St. Mary's).

If existing marble, stone or terracotta basepanels have been painted over, they can be easily refinished, but care should be used in selecting the paint remover. A test in an out-of-the-way area should be made to determine suitability and effect on the base material.

All finishing materials should be kept up and away from the actual ground plane (a minimum of 150 mm or 6 inches is recommended, depending on how much rain and snow accumulation occurs). This can be done by extending the paving materials of the exterior floor up the wall as necessary or by extending the foundation materials up above grade.

Display Windows

- *Maintain continuity of large display windows. If smaller windows are necessary, use either painted-out glass or similar dark, smooth material in large sizes surrounding smaller windows to maintain image of large display window.*

- *Maintain original display window frames.*

The display windows are the central and largest components of a storefront. Their transparency, size and location encourage window shopping and allow the potential customer an inviting view of both merchandise on display, as well as the interior of the store itself. They also allow sunlight to enter the store and increase the sense of openness inside. These windows reduce the barrier between the store and the customer on the sidewalk; the store space becomes a part of the public street.

Sometimes stores are occupied by restaurants, offices or other businesses which have no need for display windows. Others, like jewellers, think their display needs are best handled by much smaller windows. The location of storage areas at the front of stores is another, though infrequent, reason for blocking display windows. The displacement of large display windows with solid walls or smaller windows significantly damages the visual connection along the shopping street and the effect of a continuous display case is significantly disrupted. Furthermore, because natural lighting and views are restricted or eliminated the closing off of windows reduces the attractiveness of the interior of the building.

The display windows are the central and most significant feature of the storefront (Toronto, I). Large display windows are important visually and socially. They should not be blocked off or reduced in size, if it can be avoided.

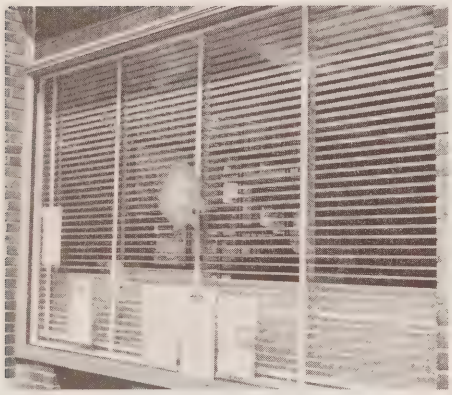
Traditionally, non-retail businesses have used display windows to promote their business and make it appealing to passersby (St. Mary's).

The traditional practice of simply using curtains or blinds when privacy was necessary, maintaining the pattern of large display windows is still useful today. Reduced display areas are also possible, while still maintaining the large areas of display window glass: display cabinets, with smaller openings can be installed immediately behind the glass with either the necessary areas of glass "blacked-out" with paint from behind or with the solid faces of these display cabinets painted an appropriately dark colour. If it is necessary to replace display windows with more solid finishes the new materials should be similar to glass in smoothness and sleekness. The overall proportions and size of the original or typical display window should be replicated.

As with other parts of the facade, a storefront generally looks better when a balance is maintained between vertical and horizontal lines. For this reason vertical display windows should generally be avoided.

To help the storefront fit in better with the facade, setting back or slightly recessing the display windows closest to the street (150-300 mm or 6 inches-12 inches) can be very helpful. However pushing these windows back any further begins to separate them from the sidewalk and its activities. The invitation to window shop and step into the store is reduced as is the continuity of the display windows on the street. It should also be remembered that display windows, today as yesterday, allow for attractive painted signage.

If privacy or environmental controls are necessary, they can be handled in simple ways that do not affect the scale or flexibility of the windows (New Liskeard, l, and Stratford, r).



In terms of solar control, window tinting should be used judiciously so as not to overly restrict views into the display areas. Awnings provide a more effective means of climate control. If the entire display window is to be replaced, doubleglazing should be considered to increase the heating efficiency of the building, as well as to eliminate the problems of condensation associated with single-glazing.

Display window frames are made of either metal or wood. Most original cast iron and many original wood frames have stood up well over time and should be maintained; not only will a better fit be ensured, but repairs and repainting are cheaper than replacement. If the original frames have been lost or are severely damaged, they can be replaced with new frames using patterns similar to the original in either wood or steel. Commonly available extruded aluminum frames will also work reasonably well provided their profiles are simple and they are dark in colour.

Smaller displays can be achieved in ways that do not reduce the overall size of the display windows. This jewellery store has built display cases behind plate glass (St. Mary's).

The Ontario Building Code and/or the local building inspector should be consulted to determine the fire and life safety requirements for the specific display windows under consideration.

Display windows also suffer from rusting or shifting of metal supports. It is important that the vertical and horizontal framing of the storefront be visually inspected on a periodic basis so that any changes can be identified early, before the damage becomes irreversible. It should also be remembered that when clear glass panels of high transom windows have been painted over or covered over with panels or signage, deterioration becomes more difficult to detect.

Transom Windows

- *Maintain transoms in display windows.*

The display windows are frequently subdivided near the top into transoms, focusing more attention to the display area while still allowing a maximum amount of natural light deep into the store. The combination of expansive display windows and generous transoms, physically and psychologically open the store up, further reducing the barrier between inside and outside, as well as between customer and goods. Since transom windows form part of the display windows, the issues are the same and reference should be made to the preceding section.

Transoms are a valuable asset. Not only do they maximize the amount of natural light in the store, but also they can be very attractive (St. Mary's).

Storefront Entries

- *Maintain recessed entries to storefronts.*

The storefront entrance is usually recessed and pushed in from the primary plane of the display windows. Clearly separate from the windows, these recessed entries effectively call attention to the doorways, while leaving the display windows in a prominent position. The shelter and intimacy of the recessed entry further enhances the storefront and the street. Recessed entries also contribute an important aspect of depth and shade to the street and, when systematically repeated along the street, create one of the most important rhythms of a traditional commercial area.

Entrances can and should be inviting. Display windows remain prominent, but attention is drawn to the entrance by the recess (Port Hope, l, Chatham, r).

There are many possible lay-outs for recessed entries. The selection of the most suitable configuration depends on the amount of customer traffic, the kinds of merchandise to be displayed (larger items work better behind large and straight glass layouts), the necessity (if any) for moving or delivering bulky items, and the foundation and/or basement requirements below.

Storefront entries can be set back too far. Overly recessed entries are a particular problem in narrow storefronts. Generally, an entry should never be set back a distance greater than 25 percent of the storefront width (Example: if the store frontage is 6 m or 20 feet, the recess should be no deeper than 1.5 m or 5 feet). If greater depth is desired, splayed or stepped recess walls should be used. In all cases recessed entries should be well lighted.

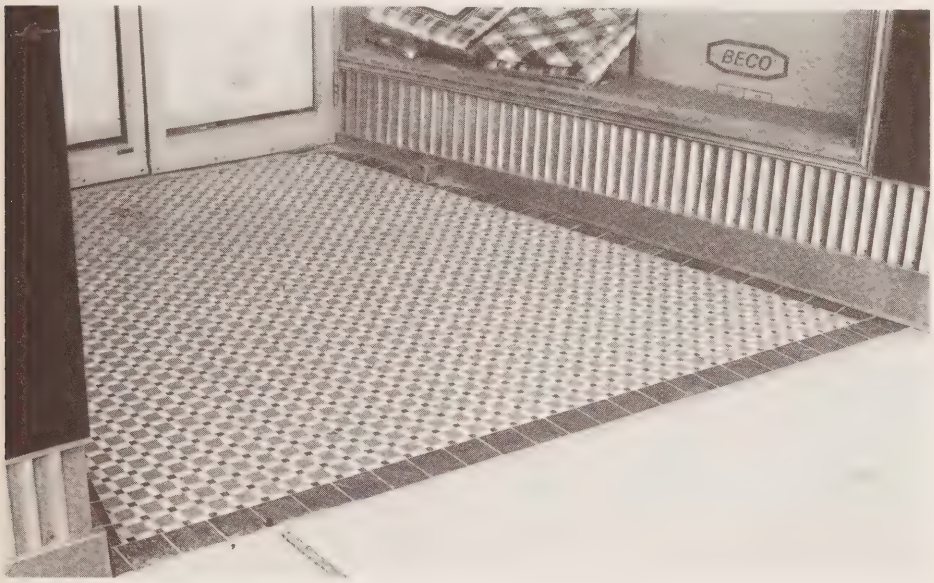
Recessed entries can make the sidewalk more generous (St. Mary's, l) and corner entries add to the uniqueness of their stores (Toronto, m). If doors are removed at corner locations, the opening should be treated as a display window and not filled in (New Liskeard, r).

Very often, corner stores have corner entrances. These unique features add variety as well as reinforcing the overall patterns of the block and should, wherever possible, be maintained. If these entrances are to be closed off, the remaining old opening should be treated as a display window and those guidelines should apply.

Exterior Floors and Steps

- *Maintain original exterior flooring and/or steps.*
- *New materials should fit in with storefront.*
- *New materials should be simple in appearance or use a regular pattern.*

The floor of a recessed entry acts as an important "welcome mat" to the customer and helps contribute to the quality of the greeting. While many merchants recognize their importance and take full advantage of this asset, many others do not. These areas are important parts of the storefront and,



The use of carefully selected materials for exterior floors can give a special greeting, as well as provide a practical surface for maintenance (Stratford).

therefore, their improvement should take precedence over any cosmetic improvements to the upper facade. In terms of building stabilization they should also receive priority attention.

This outside floor is sometimes simply an extension of the sidewalk, however it may sit over a part of the basement which means it must perform as a roof as well. Whether the storefront has exterior stairs, a step and/or an outside floor and a recessed entry, the problems, repairs and maintenance are all very similar. These facade components undergo the most wear-and-tear: pedestrians walk over them; deliveries are dragged over and dropped on them; they are susceptible to flooding, freezing, and high heat; and in the winter they are scraped by shovels and covered with salt and chemicals.

The most suitable materials to use here are those which:

- fit in with the storefront,
- are hard,
- resist the strains of shrinking and expanding from winter/summer temperature extremes,
- are unaffected by or prevent water penetration,
- resist deterioration due to other common chemicals, and
- offer traction

Materials most commonly used include concrete, exterior grade terrazzo, stone, paving bricks, exterior grade tiles, etc. Traditionally stone and wood were the most popular materials and were used, depending on availability and the appropriateness of the fit. Original stone floors should be maintained, not only because they are the most prestigious, but also because they are difficult to remove and replace. Original wood floors, although subject to rapid deterioration if not properly maintained, generally provide the best fit for their storefronts. If wood floors are damaged, they can be either repaired or replaced.

If the right type is used, stone is still the most prestigious material (and the most durable). However not all stones fit in with storefronts. Some types, such as flag stone, are too strongly associated with residential, suburban or rural images and are inappropriate for use in traditional commercial areas. Whatever the material, the finished floor should not dominate the entrance. A floor that is simple in appearance or uses a regular pattern will generally work best.

When repairing or replacing steps, the building code requirements must be considered. If the floor in the recessed entry is also acting as a roof over the basement, it must incorporate adequate waterproofing properties, especially at the joints where the walls meet the exterior floors. Outdoor carpeting is not recommended and should only be used as an interim measure on badly deteriorated floors and applied only after the source of the problem (such as poor weatherproofing at the joints with the wall) has been corrected.

Floors can be effectively used for advertising the merchant's name or product (London, l). Some stone patterns are too strongly associated with residential use and are inappropriate for commercial application (r).

Storefront Columns

- *Maintain columns in storefronts.*

With the advance of technological capabilities, the structural need for intermediate columns along the storefront to hold up the weighty upper facade, has become less pressing. Visually, however, columns continue to play an important role: they provide vertical lines to balance the horizontal basepanel, transoms and signboards. When located at either side of an entry, they provide a visual frame and help to call attention to the entry. Many, particularly older cast iron columns, also offer unique and valuable historical interest.

Visually, storefront columns draw attention to the doorway (St. Thomas).

Storefront Doors

- *Maintain the original doors in the storefront. When using new, standard aluminum and glass commercial doors, choose doors with large glass panels and dark anodized frames.*

- *Use only commercial-type doors.*

The best storefront doors reflect their commercial importance, through their proportions and materials. The door, and especially the handle, is very often the first tangible contact the customer has with a place of business; like the

first handshake, the feel, weight and operation of the front door and its hardware will inevitably leave an important first impression. In this regard, the selection of hardware (handles, push-plates, hinges/pivots, closers, locks, etc.) is an important consideration; the extra cost associated with simple, quality hardware is minimal relative to other storefront improvments and the money is always well spent.

Like the large display windows, storefront doors with their large panels of glass also provide inviting views into the store, greater natural light penetration and an area for effective, but discrete signage. Further, residential doors and commercial doors are not the same, and each should be used only in its respective place.

Like other components of the facade, the doors also reinforce the character of the overall design and the appearance of the building. They should never be loud, garish or out of place. If the original doors are still in place and properly maintained, they will still perform these important roles. However, most original doors have been replaced with newer glass and aluminum commercial doors. While not performing all the roles of the original ones, the simple lines, smooth finishes and flat dark colours of many of these newer doors make them unobtrusive, allowing for a reasonable, visual fit. If a better overall fit is desired, the use of a refurbished older door, salvaged from a similar building could be considered.

Doors reflect the business. They should be made of quality materials and constructed to last (Toronto, far l & l). Many contemporary solutions can offer equally powerful images for a store (Toronto, r).

Inkan Ltd.

The fine Italianate doors, on the left, fit the style of the storefronts and facade, and should be maintained (Stratford). Many contemporary door designs may also fit well and are inexpensive. Simple doors with dark frames are best (Toronto).

Secondary Doors

- *Maintain the original secondary doors.*
- *Use doors appropriate to the function of the space they serve.*
- *Secondary doors should be different than storefront doors, but still fit in with the storefront. Use materials, colours and basic proportions similar to the storefront door.*

Some buildings in commercial areas have doors to upper floors situated on the street facade, often forming a part of the storefront. These doors operate under most of the same rules as the doors to the stores. The important exception is that these secondary doors should not be seen as more important than the shop entrances. Again, the doors should be appropriate to the function of the space they service: residential doors for residential uses.

The secondary doors should be different, but still fit into the overall facade design. Traditionally these doors were made of the same materials and in the same basic style as the storefront door, but had fewer embellishments, simpler hardware and often a reduced area of glass. A recessed, well lit entry and a door properly identified by means of well designed signage will contribute to the appearance and practical use of the overall facade.

Secondary doors should fit into the overall storefront design. Their function should be apparent and they should never look more important than the storefront door (Toronto).

Storefront Awnings

- *Maintain storefront awnings, wherever possible (especially where they run the full block).*
- *Locate storefront awnings only within the storefront area. If a storefront cornice or signboard exists, consistently locate awning directly below these whenever possible.*
- *The bottom of the storefront awning should be no less than 7 feet above the sidewalk (check with municipality for any local restrictions or requirements).*

Awnings, together with large display windows, help diminish the barrier between inside and out; by providing a physical extension of the building out over the sidewalk. This creates a contained and protective space where shoppers can step away from the rush of traffic and examine the displays or shop inside. It also provides shelter for merchandise displayed on the sidewalk. They are a valuable commercial feature.

Awnings can provide good store identification (North Bay).

Awnings also attract positive attention and offer an opportunity for store identification. Signage can be incorporated into the drop flap or valance. The festive nature of awnings makes this facade component the most appropriate place for bright colours and patterns. Again, these colours and patterns should enhance the features of the facade and its colours and patterns.

Consistency in storefront heights and awning locations can provide further reinforcement to the important patterns of the facades and the street wall. While awnings may not be critical to every storefront design, they can produce immediate and dramatic changes at moderate costs.

Visually, awnings are very strong horizontal features. They can, if not properly located, severely alter the balance and proportions of the storefront. The dominant vertical features of the storefront—the piers—should not be covered over by the awnings; awnings should be located only within the area framed by the storefront piers. Other vertical features, such as columns and transom or window divisions, can also play an important role in maintaining a proper balance between vertical and horizontal lines. (The use of vertical stripes in the awnings may also help in some cases.) The cornice, as the top, of the storefront should be left intact. Placement of the awning below the storefront cornice is essential. Ideally this also applies to all parts of the awning, including any suspension cables or supporting devices. Awnings provide a simple, but effective means of climate control, protecting customers and the storefront from rain, snow and when necessary, sun and glare. Awnings may be fixed or operable. The fixed variety may be less expensive than the operable type, but they are not as flexible for climate control. With an operable unit, an awning may be retracted during the winter to allow the winter sun to penetrate and lowered during the summer to provide shade and reduce heat buildup in the store.

Fixed awnings (also called canopies) can be made out of wood, steel, aluminum and other such permanent materials or from the same frames and sheet materials used for operable types. Awnings made out of wood and steel are also heavier and their connections to the building walls require greater care. Frequent inspections are needed both to check and repair any damage to the wall and to ensure the canopy does not sag or fall. Canopies made out of aluminum are lighter, but more susceptible to damage (once bent or dented, these canopies cannot be satisfactorily straightened).

As with other facade features, the style of awning selected should be appropriate to the commercial and urban context of the area; residential aluminum canopies should be avoided.

Awnings should always be located below the storefront cornice, between and never over the storefront piers or pilasters.

Residential aluminum canopies are neither visually appropriate nor practical.

Signboards and Signage

- *Restrict signs to storefront.*
- *Use no more than three signs.*
- *Use no more than one large sign. The large sign should be flat and located on the signboard.*
- *Additional signs should be small.*
- *Limit information on signs.*
- *Signage lettering should be simple and straight forward.*
- *Remove all large, projecting signage.*
- *Remove all other overly large and inappropriately located signage.*

Signage has a strong impact on a commercial area and in the recent past has tended to overshadow the facade (London, l). Properly placed on the storefront, smaller carefully executed signs can create a dramatic effect (Stratford, r).

An attractive, well maintained facade is the most effective form of store identification and advertising. Improperly located signs, which are excessive in scale or poorly maintained, are common on the facades of Ontario's commercial streets. They are one of the major visual problems in commercial areas today.

Signage has always played a key role on the streets of commercial areas. The signage problems of today were avoided in the past largely because signage was a local craft. Local sign makers used a limited number of materials, applying them within known and well respected patterns. The result was a coordinated and more effective commercial area. Mass production has largely replaced the locally sensitive methods with a more standardized, international approach provided by the major sign manufacturers. Signs, however, can still be designed to fit the local context, frequently at less cost.

Size and Location

Many municipalities recognize the importance of proper sign location and size, and have enacted local sign bylaws. These by-laws restrict or limit the size, location, projection over sidewalks and types of fasteners used for signs. Before considering new signage the municipality should be consulted in order to determine specific local requirements.

Signage should not overpower the facade; it is very important to remember that the streets in these areas are not highways. The scale of facades and most local streets are geared to pedestrians and relatively slow traffic. There is no need for large signs that often obliterate and waste the many valuable assets of the facade. Bigger and brighter is not better. The location of the store name and logo on a facade should be restricted to two or three areas; the signboard, the display windows or storefront door, the awnings or projecting signs. In any other location it is difficult to achieve positive results, in terms of signs which are both effective and supportive of the facade and the street.

Despite attractive lettering, both these signs obscure the original facades and disrupt the continuity of the street.

There are many large projecting signs that when viewed individually are visually interesting and colourful. However all signs of this type, whatever their individual quality, are usually counterproductive when used in traditional commercial areas; they often dominate the storefront as well as the entire facade and they almost always interrupt the patterns and continuity of the street.

The signboard is located above the display windows and transoms and below the storefront cornice. Occasionally the signboard itself acts as a cornice to the storefront. This is the best location for the largest signs. As with other parts of the storefront, the signboard should fit in with the rest of the facade and should not span more than one storefront. In cases where the operations of a store have expanded into a number of adjoining storefronts, individual, repeating signboards should be considered for each of the original storefronts.

The storefront signboard is the best location for a large sign (Thunder Bay).

Repeating signboards work well for multi-bayed storefronts and are the best solution for stores whose operations have expanded into adjoining storefronts (Toronto).

Small overhead signs with simple lettering provide information for the pedestrian and do not detract from the storefront (Toronto).

Materials and Design

Individual letters applied to the face of the signboard are, as a rule, more attractive than sign boxes and much easier to maintain. Signs should be lighted by an external source, such as a spot light or flood light. Simple straightforward lettering is best. Two factors that should be considered are that the lettering should reflect the business's image and the style should relate to the overall design and historic period of the storefront. If an internally lighted sign box must be used, a dark background with light letters is a better choice. Accumulated dust and dirt inside the box is less visible and the overall visual affect is less garish.

Good signboards can be fabricated from marine exterior plywood. The addition of a moulding around the edges will not only enhance the appearance of the signboard, it will also retard water penetration at the edges. A wide variety of lettering styles are available in wood, metal, several types of plastic and molded fibre glass. The need for painting may be a consideration in a selection. As a rule, matte finishes show soiling less than glossy finishes.

Smaller scale painted signage in display windows or doors positioned at eye level can be particularly effective when used in conjuntion with the signboard or hanging signs. Whereas the signboards are designed primarily to be viewed from cars and from across the street, window signs, hanging signs and awning signage are designed for pedestrians. Pedestrian scale signs should be small and positioned to interfere as little as possible with neighbouring signs.

Product signs can be misleading. This store sells not only cigarettes, but also groceries and, health and beauty aids (Toronto).

It is occasionally assumed that one kind of sign is as good as another and the least expensive is therefore the best. Mass produced signs, sponsored by product manufacturers (soft drinks, film, cigarettes etc.), are usually the cheapest of the large, internally lighted, sign box variety. In addition to the common problems associated with sign boxes, these product signs sometimes restrict the number of potential customers, projecting an overly limited range of products and services.

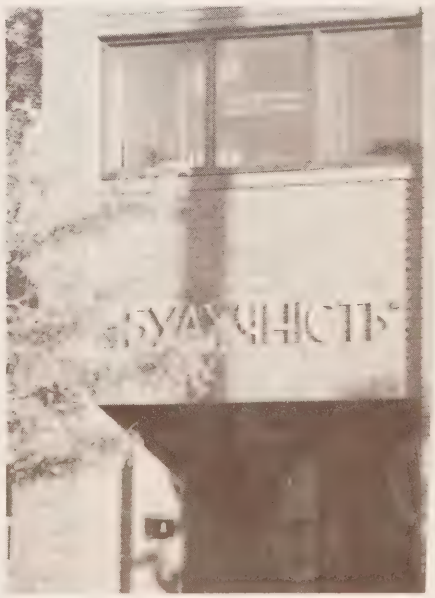
Custom-made signs often cost less and show more concern for the quality of the business. The advice of a professional graphic designer should be sought, but talented local sign makers can also do a good job. In either case, consistency of lettering and quality is more important to remember than size.

Information on any sign should be limited; the shortest message has the greatest impact. Commonly understood symbols can also be very effective, sometimes requiring no further information or lettering.

The removal of overly large and/or inappropriately located signage is among the first steps in improving both the facade and the street. The costs are small, the effect is dramatic and the results are immediate.

Signs should be well maintained. From time to time a visual inspection of the fasteners used to attach signs to walls will reduce potential problems in the future. Unkempt signage is an eye-sore and detracts from the appearance of the building and the streetscape in general.

In some situations, filigree neon signage can be unique and eye-catching without being disruptive; individual lettering applied directly to the facade can be equally effective (both Toronto).



Storefront Cornice

- *Maintain storefront cornices, aligning with neighbouring storefront cornices.*

The traditional storefront cornice clearly caps the storefront and separates it from the upper facade. Together the storefront cornices of the street often form the strongest and most continuous line on the street, visually uniting the various buildings.

Existing cornices can be made from many materials: masonry (including stone), decorative woodwork, decorative pressed metal, terra cotta, ceramic tiles, etc. The most common problem associated with cornices is deterioration as a result of inadequate or deteriorating weatherproofing (especially flashing and caulking). Periodic inspections, recaulking and any necessary repairs will provide longer life for these valuable features.

If the existing cornice is in bad shape, repair is generally cheaper and preferable to replacement. There are many reasonable ways to repair cornices and similar features. (Many home renovation books also offer detailed suggestions.) If the cornice is missing, check the basement or attic where a previous owner may have stored it. If it cannot be found, a suitable replica or a simplified version can be made out of basic geometric pieces, in the right proportion, properly related out of stock lumber. In redesign, a new cornice can be added.

Consistently aligned storefront cornices provide the strongest uniting line on the street (Toronto, l). Cornice brackets can either be repaired or inexpensively replaced with wooden replicas (Markham, c, London, r).

New cornices can be made from simple materials in many new ways. This example uses sheet metal, simple brackets and incorporates concealed lighting for facade illumination (Toronto).

Storefront Piers/Pilasters

- *Maintain storefront piers/pilasters.*

While the storefronts on the street act together, they nonetheless should maintain their own independence. Relatively substantial piers, on either side of the storefront, usually separate it from its neighbours. These piers are normally the outside faces of the building's party walls. These structural supports also serve to visually frame the display windows, in particular, and the storefront, in general. Their repetition along the storefronts of the street creates another valuable visual pattern.

The materials used to make piers and pilasters include: masonry (including stone), marble, granite, terra cotta, cast iron, decorative woodwork, decorative pressed metal, structural glass veneer, ceramic tile, etc. These features pose few problems, if maintained. Periodic inspection of the weatherproofing at the top and at the bottom is recommended.

Piers and pilasters help to frame the storefronts (Thunder Bay, l). Piers are often clad with decorative pilasters, such as this cast iron example in Goderich (r).

Even simple facades maintain storefront piers (Chatham).

The Upper Facade

- *Maintain upper facade windows.*
- *Maintain decorative features.*
- *Maintain or introduce awnings to upper facade windows.*

The patterns of the upper facade are created by repeating window locations, upper facade pilasters and decorative features, such as window hoods (Goderich, upper, Iroquois Falls, middle and Stratford, lower).

In buildings of two storeys or more, the middle portion is referred to as the upper facade. It is characterized by a flat wall largely solid in appearance with regularly spaced windows cut into it and often with decoration applied to it. Even without stylistic applications, the size, regular spacing and decorative features of the windows are a major contribution to both the unity of the street and the individual character of the facades.

The repetitive window pattern helps to maintain a balance between the storefront and the upper facade. If the upper facade loses its pattern of many smaller openings, this balance is lost and the upper facade usually dominates the storefront.

Without proper maintenance, the condition of the upper facade, its windows and decorations, may deteriorate to the point where the whole facade, including its windows, has been covered over and valuable features, such as cornices, simply removed. The new cladding material, usually vertical metal siding, compounds the visual problems with its inappropriate, industrial qualities and scale. This popular method of covering the entire area of the upper facade with metal siding often creates more problems than it solves. It disrupts the visual patterns of the street and, when windows are covered, it limits the development potential of the upper floor to uses such as storage, rather than housing or office space. Experience has also shown that, in many cases, the cost of these measures usually exceeds the cost of proper repair.

Recladding, whether partial or total, can also contribute to physical problems such as: continued deterioration of the existing wall; difficulties with proper inspection; and added weight of the new cladding. Many types of metal and vinyl siding trap moisture in the wall, at times resulting in the rotting of any wood covered over by the siding. If recladding is to be done, these problems will require proper attention.

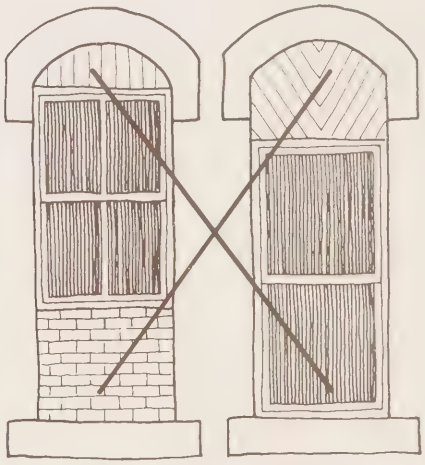
Sometimes upper facades are reclad in visually more sensitive ways: upper facade windows and some semblence of cornices are maintained; more appropriate horizontal, clap-board style, siding is used. Even these, however, can pose problems of proper integration into those commercial areas where upper facades are not clad in wood or similar siding.

Re-clad facades, even though they appear neat and clean, can be disruptive to the valuable patterns traditionally established in the upper facade.

Another problem commonly found in the upper facades of commercial areas is inappropriately replaced or boarded up windows. Proper maintenance is always easier and repairs are always cheaper than replacement. If a window has deteriorated so badly that it cannot be repaired, a replacement to match the existing units is not very difficult to find. Standard wood-framed windows are readily available and special or custom-made types out of wood are not much more expensive or difficult to obtain. While occasionally some adjustments to existing window openings can be made to accommodate a standard window, they should not be adjusted more than 50 mm (2 inches) in any direction.

Re-cladding the upper facade can respect the key features of the upper facade, such as the alignment, size and repetition of the window openings, building cornice and pilasters (St. Thomas).

When replacing windows, the original window opening should be retained or the facade carefully redesigned. Arched windows should not be blocked out.



Arched openings can be carefully fitted with more standardized windows without blocking out any of the openings (St. Mary's, I).

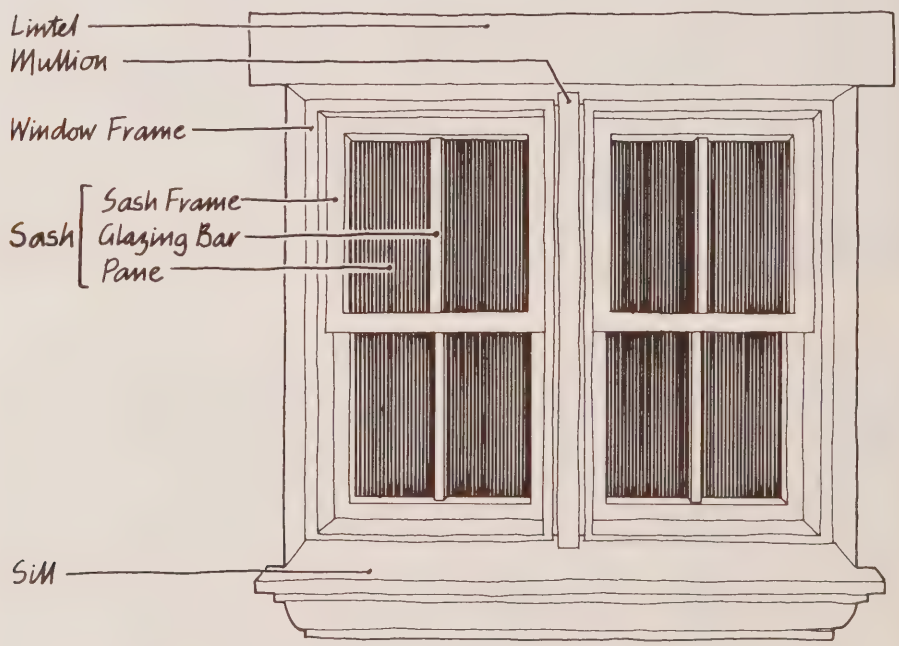
Awnings can enhance upper facade windows and add colour and interest to the street.

The proper treatment and maintenance of existing wood windows can prevent many major problems from developing later. The wood should be periodically checked, particularly the sills and the bottom of the windows where water may have been collecting over the years. Where it is soft, cracked, or split, the old paint should be scraped off, then the cracks filled with caulking or wood putty. Finally, it should be sanded, primed and repainted to prevent further deterioration. Loose or broken window panes should be removed together with the old glazing putty. New glass should be found to match the existing panes and installed using the appropriate materials. In order to prevent water from entering the wood frames at these points, the joints between the window and its masonry opening should be checked and, when necessary, recaulked. The flashing above the windows should be checked for the same reason. The fitting of existing single glazed windows with traditional storm windows to help reduce winter heat loss is also less expensive than replacement of existing windows with double glazing. This approach has the added advantage of retaining the architectural character of the original facade. Generally, the earlier considerations for glazing and framing display windows will also be applicable to windows on the upper facade.

The internal patterns established by the frames, mullions, sashes and panes of glass found in windows should also be respected. If the upper storeys are required for storage or must remain vacant, the windows may be dressed from the inside with simple colourful blinds or the like to create a more attractive overall appearance and to help reinforce the important patterns of a traditional commercial area. Awnings may also be used to accent upper facade windows, further reinforcing the window pattern.

Decorative features found on upper facades, such as medallions and decorative lintels, are frequently made of wood or decorative pressed metal (occasionally other materials are used, such as masonry). The maintenance or replacement needs of these features are similar to those discussed in the earlier section dealing with storefront cornices.

Parts of a window.

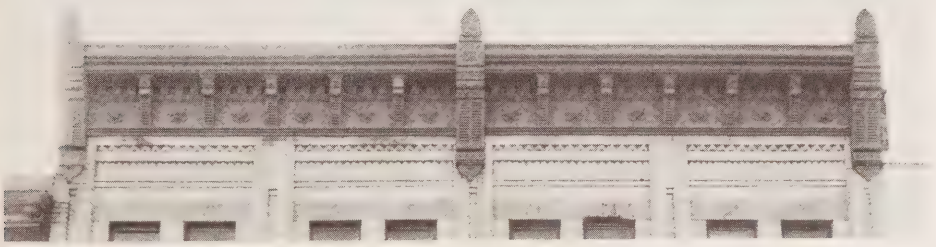


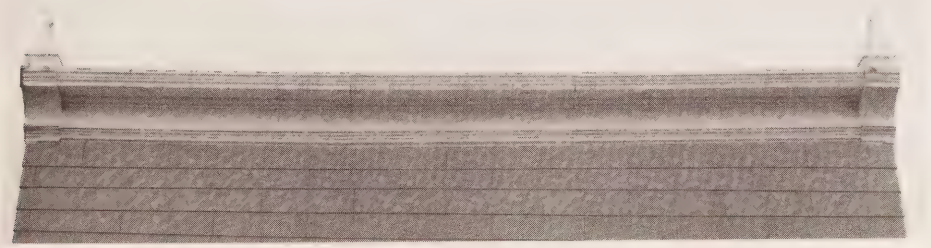
Building Cornice/Roof

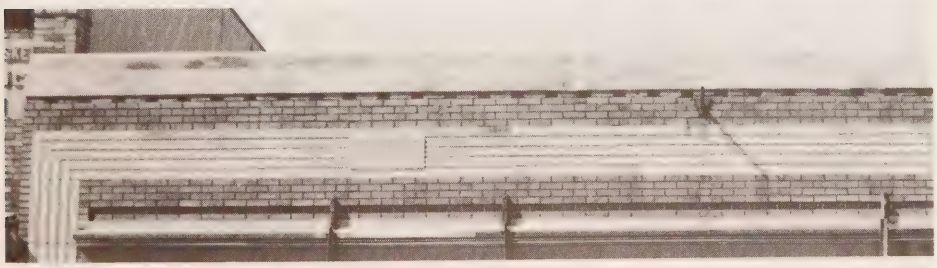
- *Maintain building cornices and decorative roof features.*

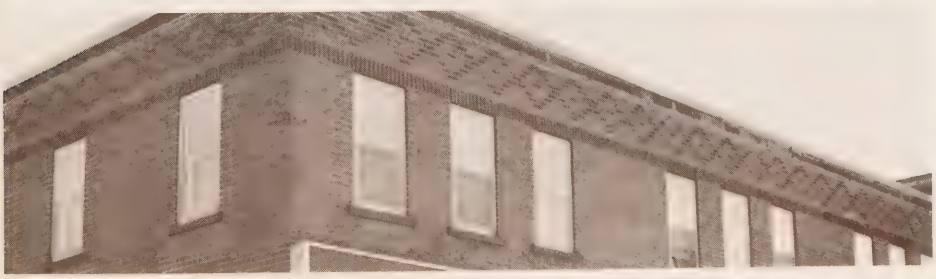
Usually a decorative cornice, a pitched roof, or both, top off a typical facade. These features play the obvious, but very important, role of visually capping a facade. When an upper facade is capped with a cornice, the large wall area is visually restricted. Not surprisingly, buildings in commercial areas which have had their cornices removed for various reasons and some modern buildings built without them, look incomplete and less substantial. The materials, maintenance, repair and replacement for building cornices and storefront cornices are the same.

Traditionally, the roof lines of commercial facades display invention and diversity. Turrets, towers, mansard roofs, high parapet walls, dormers and pediments are examples of some of the many roof line forms which add character and identity to facades and streets. These should be maintained.









Building cornices can be unique and decorative features, from top to bottom: Spanish Revival in Fort Frances, Italianate in Stratford, Edwardian in Iroquois Falls, Style Moderne in St. Thomas and Modern Brick Vernacular in Kapuskasing.

Buildings with the cornices partially or completely removed look incomplete.

Many buildings are topped with sloping roofs and cornices (Perth, l); in others, the consistent alignment of cornices unifies the various buildings along a street (Coburg, r).

The turrets capping the corners of this building are examples of some of the other forms which add character and identity to facades and their communities (Brockville).

Colour

- *Select colour for large areas of the facade (storefront, upper facade walls) consistent with or complementary to those prevalent in the area.*
- *Use a limited number of colours: two or possibly three.*
- *Use the original colour scheme of the facade where possible.*

The careful use of colour is traditionally one of the simplest and most visible expressions of individuality. Colours also help to define the specific "look" of commercial area and help further to tie the various facades together. It can also unify the parts and components within any one of these facades.

The physical problems and procedures of painting various parts of the facade, particularly the masonry of the walls, is presented in the following chapter and should be referred to before deciding what to paint. As a rule, masonry surfaces that have not been painted should not be painted.

For stores which have expanded into neighbouring buildings, paint can be used to create a single image (Waterdown).

The results of repainting a facade are both immediate and dramatic. While this type of improvement allows for a degree of experimentation not possible with other techniques, the immediacy and power of its impact requires careful consideration of colour schemes.

The simplest and safest approach is to paint the facade one colour. This will clearly provide a unified appearance, particularly useful where crude patching of the walls has previously occurred. A colour should be selected that is subdued and relates to the surrounding buildings. (It should be remembered that paint colours on large surfaces come out much brighter than they do on small paint chips.)

A problem with painting is that valuable features, such as cornices, can be obscured. If such valuable features do exist, and are made from materials other than those of the facade's walls, a second, contrasting colour can be used to highlight them. This approach requires a little more care in selecting both paint colours and what should be painted.

Since one of the advantages offered by painting is the visual linking or unification of the building components, features should be selected from across the entire facade. These could include the storefront (basepanels, columns, window frames, doors, storefront cornice and if they are made of a material different from the upper facade walls, the storefront piers/pilasters), the upper facade windows (decorative lintels, sills, and frames) and the building cornice. This approach can also be followed for those facades where the walls are left unpainted.

The colour for this highlighting should complement the background colour of the unpainted masonry or the paint colour selected for the bulk of the facade. If some features on unpainted walls (such as window sills and/or decorative lintels) exist as unpainted stone, their colour should be used as the paint colour for the remaining features which are to be painted. Frequently, the use of a contrasting colour, but still complementary to the background, creates dramatic results.

What to paint.

BACKGROUND
- Wall Surfaces
- Storefront Piers

HIGHLIGHTING
(Major Features)
- Cornices
- Decorative Labels or Lintels
- Window Frames
- Storefront Columns
- Basepanels

ACCENTING
(Minor Details)
- Window Sash
- Display Window Frame
- Storefront Doors
- Small details in Cornices, Labels, Lintels and Basepanels

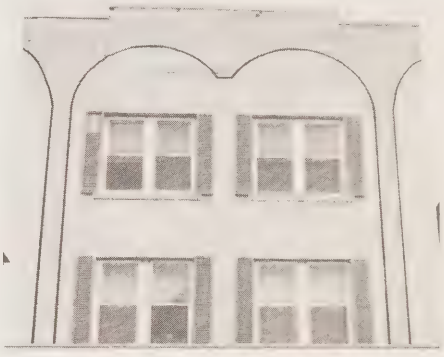
While two colours should be sufficient for most facades, the use of one more carefully selected colour for only a few smaller details could be considered. This approach could effectively be used to make the display windows seem larger and more generous, thereby reinforcing one of their key qualities. Usually a dark shade of the highlight colour works best. In addition to the frames of the display windows, some other facade components that could receive this third, dark colour could include: the storefront door, sash frames of the upper storey windows and a few, small details of the cornices, decorative lintels and basepanels. If a bright colour is desired, it should complement the other colours in the facade, be used sparingly and only on these latter features. However, care should be taken not to over-decorate the facade.

It is worth noting that in skilled hands, some missing facade features can be literally painted on, at least one-dimensionally. As was noted in the previous section, it is rarely a good idea to create "fake" history by introducing elements clearly out of place with the existing facade. Notwithstanding these concerns, dramatic and strategic use can be made of paint to create murals, unique images or recreate long-gone facades. Such use is not necessarily out of keeping with traditional commercial architecture.

If a number of neighbouring stores co-ordinate their paint colours, the impact will, of course, be that much greater. If authenticity is desired, the older and original colour schemes can be discovered by scraping away the accumulated layers of paint from small representative areas of the facade. Over time, the paints will have discoloured slightly, but a light sanding and wetting of the exposed paints should reveal their original colours. The LACAC,

Paint can be used imaginatively in commercial areas, as in this Ottawa mural, where a formerly blank wall has been given pilasters, windows, etc.

Avoid using paint to create artificial history or inappropriate styles.



where one exists, might also be able to offer colour suggestions appropriate to specific buildings. In general, local paint suppliers have colour charts and will be able to assist in the selection of suitable colours and type of paint. The bibliography, in this handbook, also contains two thorough references on colour.


TOWN HALL

4. Common Materials and Maintenance

The regular maintenance and the occasional repair of a building facade is both necessary and rewarding:

- A well maintained facade looks good;
- A well maintained facade retains its value over the years;
- A well maintained facade provides the security of knowing it is safer and more sound. Because preventive safety measures are undertaken as part of the maintenance program, minor problems are corrected before they can result in serious property damage and personal injury. It provides peace of mind;
- A well maintained facade saves time and money, because problems are caught earlier when they are smaller;
- And a facade that is well looked after outside, clearly tells the potential customer that quality and care, both in terms of goods and services, are important concerns inside.

A well maintained facade capitalizes on valuable assets (Toronto).

In this chapter some of the most common facade materials, their maintenance needs and repairs are addressed.

Keeping the facade in good shape is an on-going process. It can and should be part of regular building maintenance involving the priorities of life safety, structural stability, weatherproofing and building services for both the exterior and interior of the building. As part of the process, the local municipality should be consulted. Most cities and many towns in Ontario have an occupancy and maintenance by-law that details the minimum level of maintenance required.

Wood

Wood is the most common material used in traditional commercial facades. It is used for:

- Window and door frames,
- Exterior flooring in recessed entries,
- Basepanels
- Storefront piers/pilasters,
- Signboards,
- Cornices and other decorative features,
- The walls of the upper facade—bevel siding (clapboard), tongue and groove with "V" joint, drop siding (ship lap), board on board (board and batten), wood shingles or wood shakes.

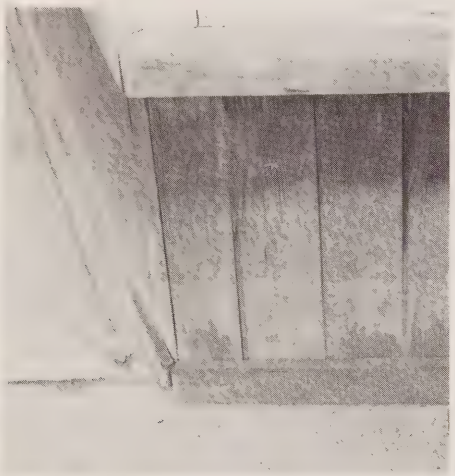
Wood is readily available, economical, relatively durable and easily worked. Usually exterior wood surfaces are painted or stained. All wood with the exception of cedar and the newer pressure treated varieties of stock

lumber requires a protective coating of paint or oil based stain (even cedar may need a wood preservative to prevent damage). These protective coatings need to be reapplied periodically. Problems most commonly associated with wood include:

- Excessive moisture or drying typified by cracks, splitting and shrinkage (the opening of end joints),
- Rot typified by soft and crumbling areas,
- Peeling paint,
- Damage from insects.

These problems can generally be prevented with regular maintenance. Excessive moisture or drying usually occurs because the protective coating has deteriorated and needs reapplication. Repainting should be part of a regular maintenance program. Depending on the climate and the quality of the paint, wood should be repainted with one coat of paint every 3 to 5 years.

Even though cedar and pressure-treated woods retard rot, they discolour unevenly. This discolouration becomes particularly noticeable in areas exposed to salts and chemicals, or standing water and snow, such as this basepanel.

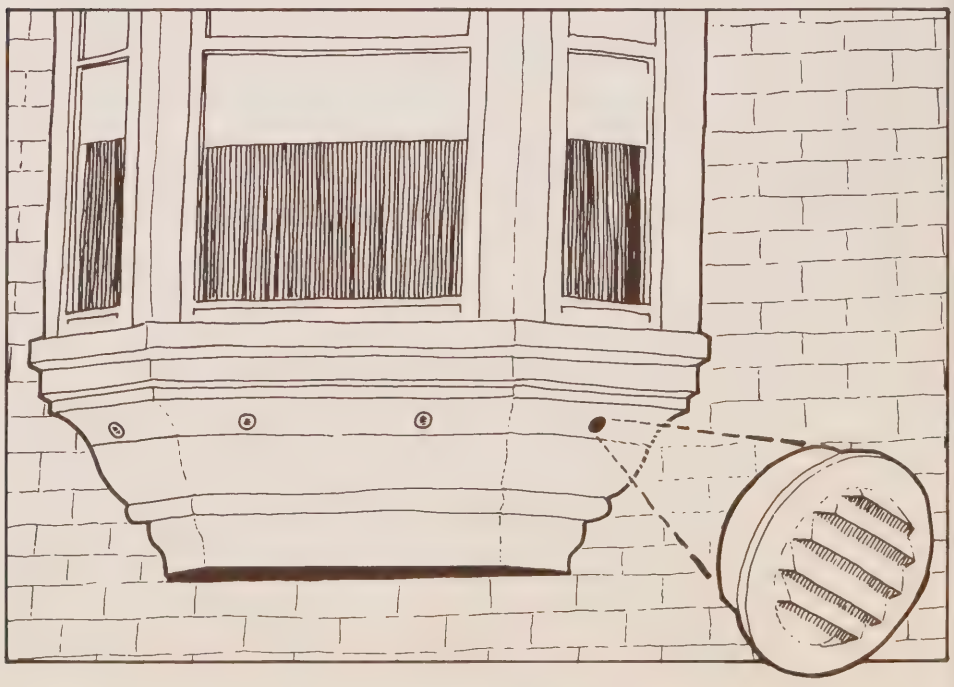


Water can also get into woodwork through joints between walls and trim and through deteriorated flashing. All joints should be periodically recaulked. There are many different types of caulking available. A local expert should be consulted to determine which is most suitable to a particular application and problem.

Insufficiently sloped exterior window sills and other wood members that do not properly shed water, allow water to sit and penetrate the wood; this eventually leads to rot. Rot is especially a problem with wood located near the ground where melting snow and ground water will be absorbed by the wood. Sills and similar features should be checked for sufficient slope to shed water and adjusted if necessary. Wood should be kept up away from the ground by at least 150 mm (6 inches) and checked periodically. The paints and primers used in these highly susceptible areas should be of a high quality and specifically formulated for exterior wood applications.

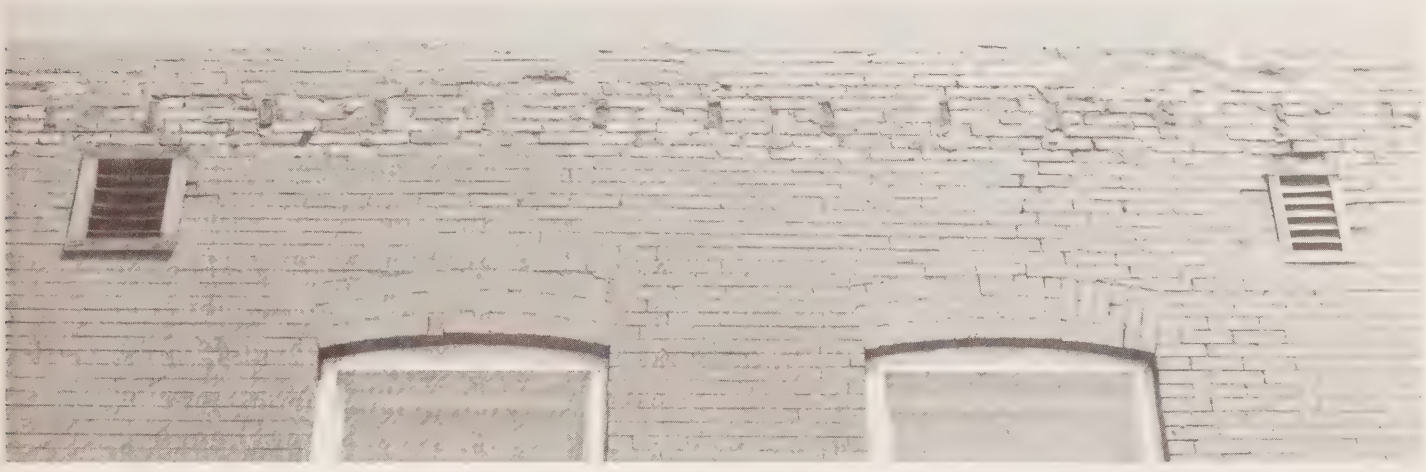
Dry rot is a form of decay resulting from any dampness in the wood which is not allowed to escape (almost all woods naturally contain some level of moisture). Dry rot has a noticeable smell, but is more difficult to catch at an early stage since it usually occurs in hidden areas. Any roofs or hollow decorative features where wood is concealed (as in some pressed metal cornices or the bases of projecting bay windows) should be adequately ventilated. If any doubt exists, it is easy to drill holes and install some vents at intervals.

Dry rot in enclosed wooden structures can be retarded by the installation of vents, such as ventilator plugs.



Wood, particularly near foundations, can be damaged by insects, such as carpenter ants and termites. Piles of sawdust suggest the presence of carpenter ants, and small straw-sized tubes are usually a sign of termites. Where insect damage is a problem, an application of one of the various non-toxic treatments recently developed should be adequate or a licensed pest-exterminator could be consulted. If termites are the problem, the local municipality should be consulted immediately about assistance. If parts of the original wood siding are severely damaged and require replacement (even with non-stock sizes or shapes to maintain a consistent appearance), the cost of replacement is usually much less than recladding the entire wall with new siding.

Maintenance is especially important on decorative mouldings and brackets because their carved and projecting surfaces expose more of the wood to the elements. The removal or covering over of such elements often creates more maintenance problems than it solves. If removed, the materials and surfaces exposed are frequently more difficult to properly maintain, as these hidden materials were never meant to be exposed. If covered over, mouldings and brackets may continue to rot or otherwise deteriorate, creating a larger problem that will have to be corrected eventually. The costs of removal or covering over are generally greater than the initial costs of repairing or replacing the original pieces.



The removal of wooden features, such as cornices, often creates more problems than it solves. Exposing softer materials not made to resist weathering is one such problem.

If some ornaments are severely damaged or missing, they can be replicated in wood fairly easily by local craftsmen. If this proves too expensive, a simplified design based on the important features of the original can be devised.

Where maintenance has not been followed, or the wood has badly flaked for other reasons, paint as follows:

- scrape or otherwise remove paint entirely down to the wood;
- treat with one primer coat compatible with the finishing coat;
- finish with two coats of semi-gloss exterior latex, alkyd or oil-based paint.

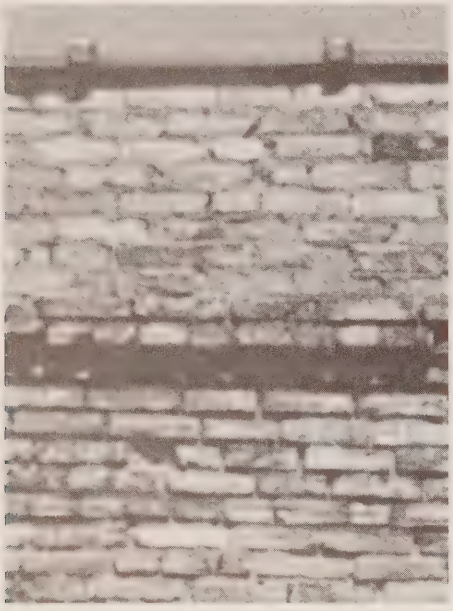
If regular maintenance is followed, this full scraping, priming, and extensive painting will likely not be necessary for several decades.

Masonry Wall Surfaces

Masonry surfaces are made up of clay brick or cut stones or both. Masonry is used in:

- base panels,
- storefront piers/pilasters,
- lintels,
- sills,
- cornices,
- the walls of the upper facade.

Under normal conditions, masonry joints need to be re-pointed every fifty years or so. In more exposed areas of a wall, re-pointing may be necessary more often. Re-pointing prevents further serious damage to the masonry, such as bricks falling out.



These materials are very hard and durable (they are also easier to patch and repair than metal cladding). These surfaces are made up of individually installed units usually placed in front of a separate structural system (wood, steel, concrete block). As a result, repairs, replacement or alteration can be accommodated without greatly disrupting or permanently scarring the facade.

In addition to regular aging and weathering (sometimes compounded by pollution), the biggest problems faced by masonry are related to moisture. In almost all cases the problems first occur in the weakest part of any masonry surface—the joints. Some weathering is to be expected in masonry joints, but crumbling mortar and deeply recessed joints can indicate water damage. White stains on the surface of the masonry (efflorescence) are usually caused by moisture migration through the material bringing the salts found in most such materials to the surface. Mould and other discolouration, too, can be signs of excess water in the material.

The most common source of excess water in masonry walls is the top of the wall (the cap or coping, where the wall meets the roof). Alternatively, it can occur at a top of a section of a wall (below window sills or decorative banding). Damaged roofs, eavestroughs and clogged drains allowing water into or pouring it onto the surface can also be sources of problems. Periodically all roofs, eavestroughs, wall copings, flashings and sills should be checked, caulked and repaired if necessary.

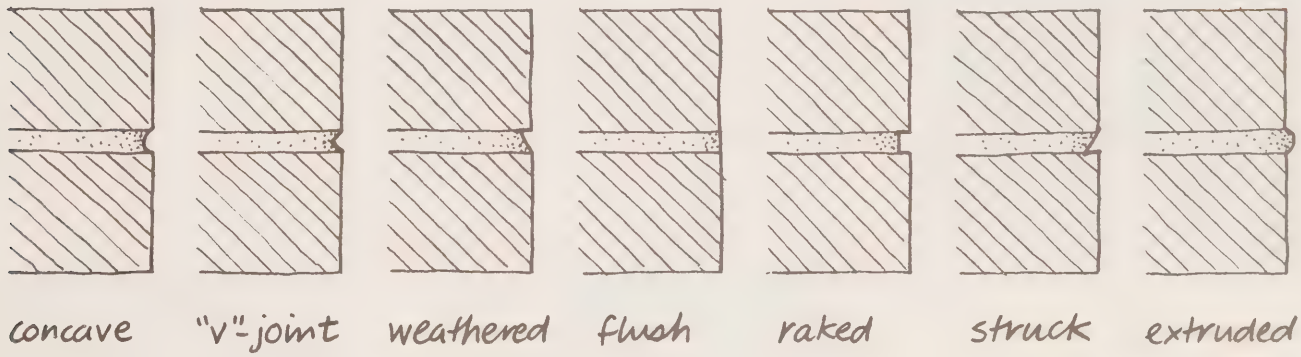
Softer masonry not made to be exposed, such as this party wall, will quickly deteriorate if left unprotected. Note that the deterioration is most severe at the most exposed top and bottom of the walls.

Re-Pointing

Mortar in masonry joints will deteriorate in time, especially in those portions of the wall most exposed to the elements. If the mortar is recessed more than 12 to 13 mm (1/2 inch) or is very loose, the joints should be repaired by repointing with new mortar (also called tuck-pointing). This will keep water out and prevent further serious damage to the wall.

Proper re-pointing requires care. Clean-out all of the mortar to a depth of approximately 25 mm (1 inch), leaving a square trough (not a V groove). The new mortar should match the old as closely as possible in style, size, colour and especially composition. Many older masonry walls were built using very little or no Portland cement at all. Mortar with more Portland cement will expand more and can cause the surface of bricks to crack. Be certain a low content of Portland cement is used. Style, size and colour of the new mortar should also match the old, particularly if all the masonry in the facade is not being repointed.

Typical mortar joints.



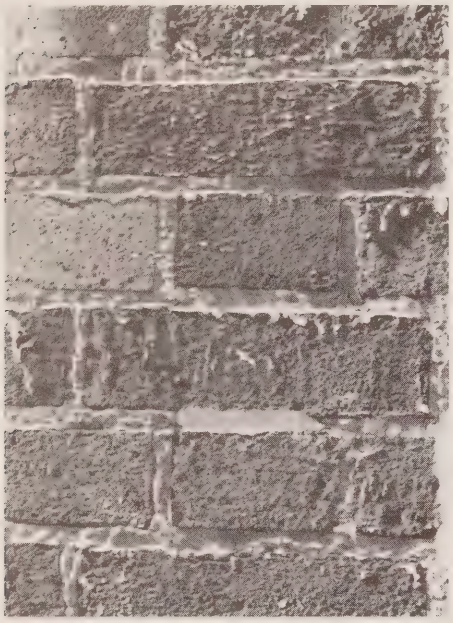
When mortar has set, but not hardened, joints are properly finished by slightly raking out or "pointing". The style (or shape) of the pointed joints affect their weatherproofing capabilities. Concave are the simplest, most common and shed water very well. "V"-joints and weathered joints also shed water well, and flush joints are fair. Raked, struck and extruded joints are not recommended for exterior joints because their horizontal surfaces collect water. Proper re-pointing, especially for an entire wall, is very time consuming. A reputable masonry contractor should be hired. Re-pointing is really necessary only once every 50 to 60 years and will help maintain the durable and attractive quality of masonry surfaces.

Re-Painting and Cleaning

Cleaning a building wall can visually bring it back to life. For buildings with painted masonry, the best solution is simply to re-paint rather than to chemically strip and clean them. To re-paint:

- scrape off any loose paint carefully so as not to damage any soft masonry or mortar;
- check the mortar and re-point if necessary;
- clean by hosing down the walls with a standard house-pressure water wash (washing should not be considered if there is any chance of freezing since the moisture in any damp masonry and mortar could freeze and serious cracks and spalling could occur);
- treat entire surface with one coat of masonry primer;
- finish with one or two coats of semi-gloss exterior latex paint.

Sandblasting (and other forms of dry grit blasting) damages brick masonry. It causes pitting and removes the outer protective layer of the brick.



Cleaning exposed masonry is very tricky and great care should be exercised. Improper cleaning techniques can irreparably damage a building. Techniques such as dry grit or sandblasting are too abrasive resulting in the removal of, not only dirt, but also the important outer surface of the masonry material. Brick, in particular, relies on its tough outer skin to protect its soft porous inner core. Removal of the skin exposes the inner core to the elements, especially water penetration, causing irreversible and continuous deterioration that cannot be halted by a sealant.

The soft mortar joints are also frequently blasted open by abrasive or high pressure cleaning, causing further serious problems. Abrasive cleaning also damages other materials, such as decorative pressed metal and wood. Sandblasting or dry grit blasting is not recommended and should not be used. Silicone protective coatings should also be avoided. They have a very limited life span (2 to 3 years at best), require careful application, and may even cause deterioration under certain conditions.

If cleaning is necessary, the gentlest method should be tried first. Often scrubbing a building with soap and water will be sufficient to clean it. Use standard house-pressure water (275 to 550 kPa or 40 to 80 psi), scrubbing with a bristle brush. Do not use steel brushes or metal scrapers—they can damage the mortar and softer masonry.

Other methods involving chemical solutions, steam, water under high pressure or various combinations are also available. Chemical cleaners, however, may also cause problems. Acidic based cleaners should never be used on limestone or any marble, including travertine.

Whatever method is considered, cleaning should only be undertaken by experienced professionals. A test sample should first be tried on different materials (preferably in less visible locations) before making a final decision. Edges that become more rounded and faces that rub off often mean the masonry is too soft to clean.

Flashing

Excess water in exterior walls of any composition is a common problem related to the deterioration of these walls. Since this excess water most often results from damaged or deteriorated flashings, particular attention should be paid to the materials used and the manner in which these materials are installed.

A flashing is a protective building device used to prevent water from penetrating the exterior surface of a building element or to intercept any water that might enter, directing it back out. Many materials are used for flashing. The minimum recommended weights and types of materials are as follows:*

- Exposed flashing (such as "counter" and "base" flashing): 1.73 mm sheet lead, 0.33 mm galvanized steel, 0.36 mm copper, 0.46 zinc, or 0.48 mm aluminum.
- Concealed flashing (such as "through wall" flashing): 1.73 mm lead, 0.33 mm galvanized steel, 0.36 mm copper, 0.46 zinc, No. 50 roll roofing, 0.15 mm polyethylene and 0.05 mm copper or aluminum laminated to felt or kraft paper.

*Canada Mortgage and Housing Corporation, **Canadian Wood-Frame House Construction**, 1984.

Flashing should be periodically inspected, and if damaged or deteriorated (cracks, obvious rusting, loose overlaps or any holes or punctures—even those with nails still in place), they should be repaired immediately using any commonly available product for this application (silicone caulking, epoxy paste, fibreglass) carefully following manufacturer's instructions.

When different metals are paired and are in contact with any moisture at all, a natural process occurs which results in the corrosion of one of them. As a rule, if new metal is used when repairing or patching flashing, it should be the same type as any existing metal it will come into contact with. If metal is to be used and an exact match is not possible, this type of corrosion can be reduced or prevented by separating the metals with a heavy, moisture-proof building paper or at the very least, a thick coat of asphalt-based paint. For similar reasons aluminum should always be isolated from masonry or concrete—or coated with an asphalt-based paint. Hot tar should not be used because it may eat away the protective zinc coating of some metals.

Cast Iron

Cast iron was a popular material for the early facades of traditional commercial areas. It was used both structurally and decoratively as an applied feature. Its structural capabilities meant it could span relatively long widths horizontally and carry a lot of weight vertically, while presenting a relatively slim and delicate profile. Large display windows with thin decorative features were the result.

The cast iron capitals are attractive and unique and should be maintained (Dundas, l, Toronto, r).

Cast iron is very durable and long lasting. However, if not properly maintained it will corrode. If the cast iron is in good shape, periodic re-painting is all that is necessary. To repaint:

- clean and remove loose paint and any rust with a wire brush;
- treat with two coats of rust inhibiting primer;
- paint with oil-based, alkyd or similar paints, specifically formulated for exterior metal surface applications.

If built up paint and rust are to be removed completely, a chemical paint remover or low pressure sand or dry grit blasting (550-700 kPa or 80-100 psi) can be used, followed immediately by priming and then by repainting.

Any highly damaged or missing non-structural part can be replicated in wood or recast in fibreglass reinforced plastic or aluminum, using matching (or similar) existing pieces.

Decorative Pressed Metal

Decorative pressed metal was also a very popular for commercial facades. It was often used in combination with a wooden structural backup to create ornate cornices, lintels, bay window claddings, ceilings for recessed entries, base-panels and more. It was also frequently used in combination with cast iron.

These window hoods made from decorative pressed metal have stood up well over the years. The necessary repairs and maintenance can be handled with some simple readjustments, sheet metal, caulking and repainting (Chatham).

Sometimes the pressed metal could be lead, but most often it is a sheet metal coated with zinc to retard rust. It is light, bends easily and is ideal for stamping or "pressing" into standard shapes and decorative forms.

The thinness of this material makes it susceptible to hard bumps and if the surface is scratched or left exposed, it will quickly rust. Other problems can arise from improperly ventilated wooden backups with dry rot frequently the result.

This material requires paint at all times and periodic examination of the flashings and joints. It can be scraped or chemically cleaned, readjusted, caulked and repainted easily and inexpensively. Because of the thinness of the material, high pressure cleaning methods should never be used.

Replacement with new material usually creates less satisfactory results visually and is often more expensive. If necessary, simple panels can be replicated relatively cheaply by a good carpenter using exterior grade plywood and wood mouldings.

Concrete

Not all concrete is the same. Different requirements, such as the intended use of the area, waterproofing needs and the type of base can be met by varying the concrete's density, mix and additives, and the way it is poured. Advice should be sought from an architect, an engineer or a waterproofing consultant to select the most suitable type of concrete for a particular application.

Concrete sometimes chips off in small pieces. This can be repaired by using a chemical bonding agent to secure the new concrete to the old. If the nose of a step is severely damaged, a steel angle plate with an anti-slip finish could be used, but because of inevitable rusting and problems associated with extremes in temperatures, it should be considered only as an interim measure. If concrete is being repaired or patched, the same features of the existing concrete (colour and size of aggregate stone, grooves, patterns, etc.,) should be continued. While concrete requires virtually no maintenance other than patching cracks when they occur, the joints where concrete meets other materials require periodic inspection and recaulking.

Terrazzo

Terrazzo is an elegant material, made from a combination of coloured aggregate stones and cement.

Today this material is commonly used for floors in public interiors, but it was popular between and after the wars as a basepanel finish and as an exterior

Terrazzo is easy to clean, wears well and can be arranged in many attractive patterns. If the structural base is not sound, it can crack. Patching, however, is possible.

flooring. It is still occasionally used this way. It can be patterned and accepts metal inlays such as brass numbers, letters, etc., and is easy to clean. However, where the base is not structurally sound and shifting occurs, unsightly cracks may appear. Like concrete, it sometimes chips off in small pieces particularly at the outside corners of stairs. These chips can be patched, but colour matching is difficult. Terrazzo, in its most popular form, is generally very smooth and also very slippery when wet. Non-slip types of terrazzo finishes, which in appearance are very similar to certain types of concrete, are also available.

Stone

Types of stone vary in hardness and porosity, and proper selection depends on the intended use. The harder and denser the stone, the better it is for use in exterior and high traffic areas.

Stone is a prestigious material. It is also the only paving material that very often becomes more interesting through normal wear. For these reasons where stone already exists, every effort should be made to leave it in place.

Stone is the most durable of materials and one of the most prestigious. The mortar joints, however, require maintenance.

Stone requires little maintenance. As with concrete, but far less often, stone occasionally chips off in small pieces or "spalls" off in thin layers; like concrete, it too can be patched with a high strength mortar and bonding agents. Because it is difficult to match colours and textures, replacement of stone should occur only if the damage is very severe.

The mortar joints in stone paving are subject to cracking and deterioration and require more attention than the stone. If damaged, these joints should be patched or repointed. They should be maintained at all times in order to prevent serious damage to the joints and the stone.

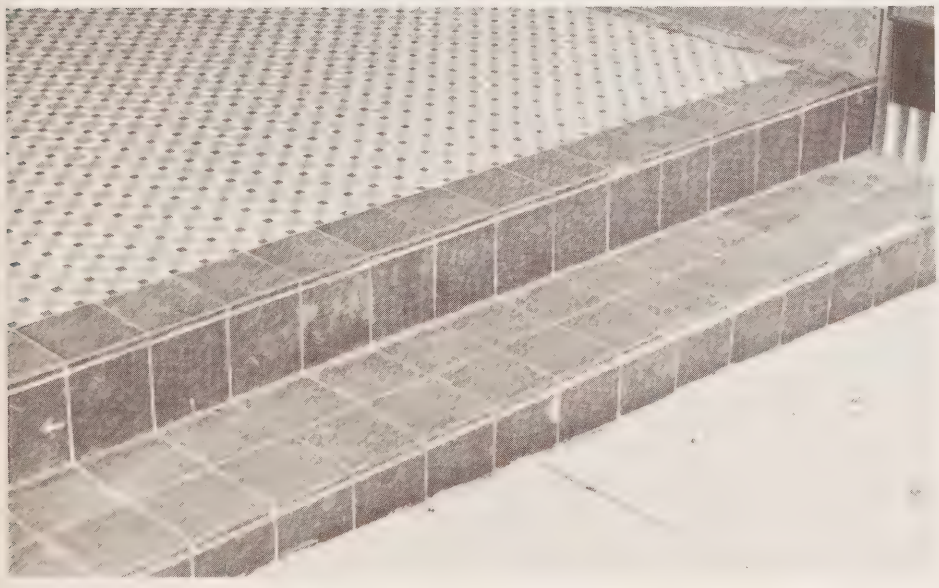
If the stone is cracked, the cracks should be filled until smooth with high strength mortar, using appropriate bonding agents to retard water penetration and further damage. If the stone is cracked through or broken, a good masonry contractor can repair it. Repairing stone is more advisable than replacement, not only because it is generally less expensive, but also because properly matching new and old stone is difficult and often impossible.

Exterior Grade Tiles and Other Veneers

The list of the potential materials that could be found in place or introduced in new work is quite long. In all cases, however, in addition to maintaining consistency with the rest of the storefront, the building and the street materials, tiles should be judged in terms of their ability to perform well under the extensive demands of normal wear and tear. Not all materials are suitable for exterior use, nor are they always appropriate for use as flooring. This is particularly the case with many tiles and even some stone veneers. Always check the manufacturers' or suppliers' written recommendations for use.

Tiles with a colour or a glazing applied to the surface should not be used in areas exposed to any kind of traffic (such as in flooring, basepanels, etc.). The outer surfaces can sometimes be worn off, exposing a different coloured and less durable material underneath. The mortar joints are also the source

of most problems, and require careful maintenance. If the tile is badly damaged, it may be replaced. However, if the tile is old, finding a replacement could be difficult. In these cases, a good tiling contractor can be very helpful. If the damaged tile is in a location where a "close match" might not be adequate, a good tile could be carefully removed from another less visible location for the purpose. When finishing an entire area with new tile or veneer, extra pieces should be purchased and saved for replacement in the future, should repairs be necessary.



Tiles can be easily cleaned and attractively arranged. Not all tiles, though, are suitable for heavy traffic or exposed locations.

5. Getting It Done: The Property Owner

The individual property owner who wants to improve his facade, whether he intends to do the work himself or with the assistance of professionals, should go through a number of consecutive steps to ensure that all factors have been considered and that the work to be done reflects his needs. The property owner, alone or with help, will:

- begin with a careful evaluation;
- proceed to develop a design based on this evaluation;
- carry out the appropriate facade improvements.

This chapter describes the steps in this process in more detail so that the property owner will understand the information needed, the range of improvement approaches, the typical problems which may arise and, ultimately, the extent of the work required and how to do it.

Step One: Evaluation

Evaluation involves careful observation of the existing facade and its context. At the same time, the property owner's goals, specific objectives and range of possible actions for the facade are drawn up.

A common mistake is to ignore these initial steps and proceed right to the design. The drawback is that the design will start to dictate the needs, such as size of display windows, rather than the other way around. A design is, after all, the solution to a problem, and it is essential that the right problem is identified and solved.

Understanding the Facade

The building should be thoughtfully considered from a spot across the street or by using a series of overlapping photographs, showing the building in as wide a context as possible. Using Chapters 1 and 3, a familiarity should be established with the building, its architectural style(s), the block and the street on which it sits, as well as the wider context of the commercial area. Reference should also be made to a facade study, if one has been produced by the municipality.

If the original facade has been covered over with sheet metal or other cladding, some important patterns and features may be hidden but still intact. Serious structural problems may also be obscured by new building skins. A careful removal of a few parts of any applied materials covering the original finish of the building will reveal the state of the original finish and building below. The examination should involve a contractor and, perhaps, an architect.

The Owner's Facade Improvements Process

Step One - Evaluation

Understand the facade

Identify potential and problems

Develop goals and priorities

List potential improvement actions

Establish feasibility

Step Two - Design

Prepare schematic design

Develop design

Prepare construction documents

Obtain permits and approvals

Step Three - Construction

Select contractor

Prepare contract

Start construction

Review samples

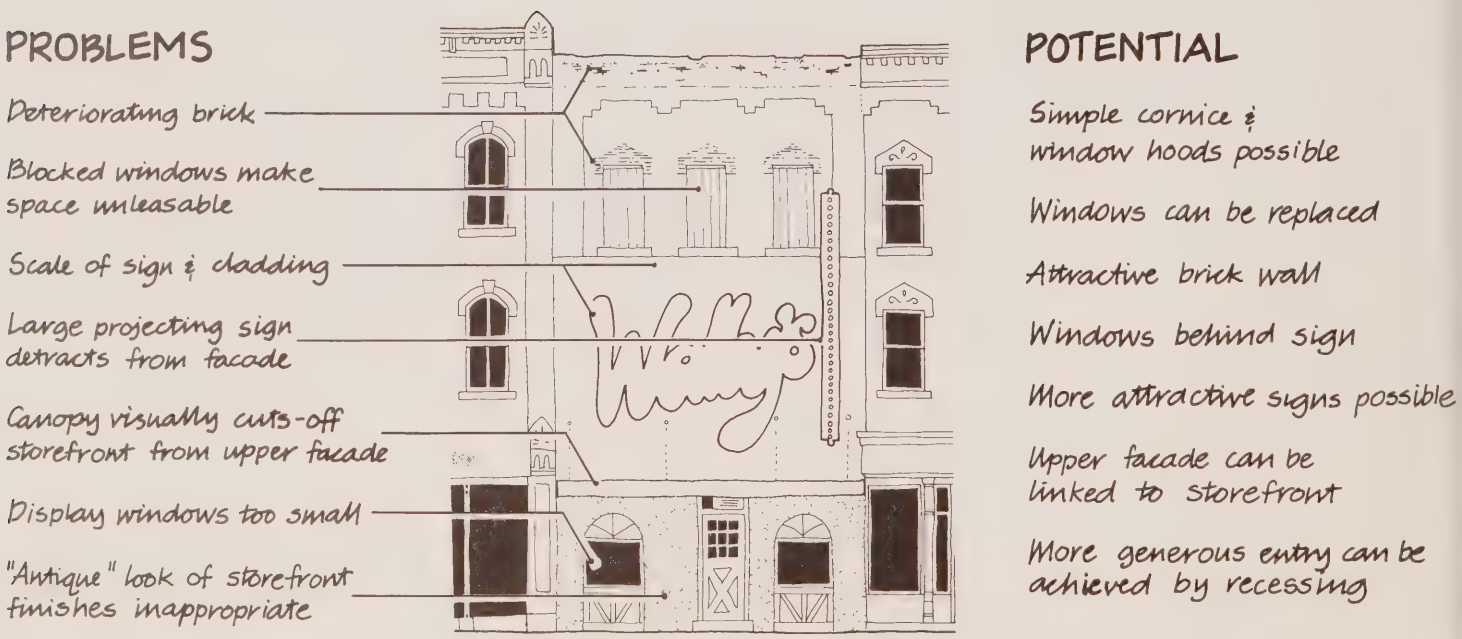
Complete construction and inspection

Neighbouring buildings can help in the understanding of a facade.

Identify Potential and Problems

At this stage important features and especially patterns should be identified, such as cornices, window openings and special materials (see Chapter 1: The Six Characteristics of a Good Facade). These can be exploited in the future by enhancement or extension. Those aspects of the building judged to be inappropriate to the facade, for example a large projecting sign, point to problems requiring attention. Physical patterns of deterioration, damaged windows and evidence of weathering should also be identified.

Potential problems should be carefully identified.



Develop Goals and Priorities

Once an understanding of the facade and its context is achieved, general goals and priorities can be established. The goals should simply state the broad concerns to be dealt with. Priorities of safety, stability and improvements, as described in Chapter 2, should also be determined. Merchandising needs too, should be taken into account and incorporated into goals, if their nature or problems warrant special attention during facade improvement.

The goals and specific objectives of a local facade study (if one exists) could also be usefully included. These goals should then be arranged in order of priority, with the need for a safe, stable and waterproof building at the top of the list. Finally, the overall budget for improvements should be set.

DEVELOP GOALS & PRIORITIES

1. Repair deteriorating brick
2. Improve storefront
3. Remove upper facade cladding & projecting sign
4. Replace upper facade windows
5. Improve/replace decorative features & wall of upper facade

Potential improvement actions flow from developed goals and priorities.

List Potential Improvement Actions

Now a range of actions can be clearly articulated, addressing the goals. Each individual element in the facade should be considered in terms of possible ways it can be enhanced, repaired, altered, replaced or removed to help achieve the goals. At this time, a long term improvement plan could be established, which allows for phased implementation within the established budget guidelines.

Establish Feasibility

After proper development of goals and possible actions, the decision to proceed on some, all or none of the possible actions depends primarily on the previously established priorities and budget. The costs of permits, any necessary lot and/or building surveys and construction (including provision of components such as custom-made signs, fixtures etc.) must also be included in the budget.

If a general refurbishing, with a new coat of paint and some simple repairs is all that is required, the work can usually be handled without the expense of a contractor. Contractors, however, offer considerable time savings and other advantages. If the work is complicated or evaluation proves generally unsatisfactory for whatever reason, the hiring of an architect should be considered.

Step Two: Design

At this stage design concepts are developed and alternatives examined. First, a base drawing showing the existing facade should be prepared, using photographs and key measurements. The basic patterns and relationships of the facade should be examined and conceptual sketches drawn up. The building department, fire department and other authorities should be consulted. If a lot and/or building survey will be required for a building permit, obtain one quickly since it is very useful in helping to make the base and subsequent drawings. This is the stage where the design possibilities can be most broadly considered, leaving the subsequent steps for more specific and detailed design development and resolution.

Design Development

At this stage, the schematic design is developed in greater detail. The facade components are precisely located, dimensioned and considered in terms of construction materials, colour, availability, ease of maintenance, etc. The developed design should be evaluated with an update of the timetable and costs.

In Brantford, a model was commissioned by the BIA to help property owners make improvement decisions.

Documentation for Construction

After an acceptable design for the facade is worked out, all the drawings and written specifications should be prepared. They should include the important dimensions, the materials, building components, construction assembly techniques, and final colours and finishes in sufficient detail to receive bids from contractors and eventually to guide construction. A construction schedule could also be prepared at this time.

Permits and Approvals

Permits may be obtained after a contractor has been selected, but it is best handled beforehand. The drawings and other documents that describe the work are submitted to the local municipality for approval and issuance of the necessary permits. A special permit is required from the municipal council for alterations to heritage properties designated under the Ontario Heritage Act (see Chapter 6). Other authorities having jurisdiction might include the Ministry of Transportation and Communications (depending on who owns and administers the street in front of the facade) or local conservation authorities (depending on how close the facade is to a river valley and other protected lands). The municipality will know which authorities will have to be consulted. Of course, the approval process should start as early as possible. The length of time necessary to review the proposals/plans and issue permits should be considered when establishing the overall timetable for the improvements.

Step Three: Construction

Selecting the Contractor

Once the drawings and other documents for construction have been completed, the next step is the selection of a contractor. If an architect has been hired, he or she could help in the appraisal and selection of a contractor, depending on the contractual arrangements. The two key words are quality and price—each equally important. In construction, as in all other business, it is "buyer beware".

A good start in the selection of a good contractor is to get personal recommendations from friends, relatives, other merchants who have recently renovated their facades, the Local Architectural Conservation Advisory Committee, if one exists, building suppliers, sub-contractors, bankers and, of course, the architect, if hired. The information about the contractor should be first-hand.

Is the contractor understandable and straightforward? As in any business, much of the terminology and procedures of the construction industry can be confusing to the inexperienced. A good contractor realizes this, and does not consider it unreasonable to explain the construction process clearly to ensure well-informed decisions are made.

Is the contractor understanding and flexible? Many contractors have developed their own way of doing things which may be contrary to the thoughtfulness required for proper facade improvements. The contractors' experience with this type of work and the results they have produced should be important in selection. A contractor should also be open to suggestions and to new ways of doing work if required by the particular situation.

Is the contractor reliable? Only those contractors who have an established business should be considered. The Better Business Bureau will have the contractor's record of registered complaints. Experience with previous clients should indicate whether the contractor generally sticks to the original estimates and timetables, whether he or she can be reached during and after construction should any deficiencies or problems arise, and whether the contractor and the workers employed are generally honest and fair.

Is the contractor covered? Contractors who do not carry sufficient insurance and especially those who try to get away with carrying no insurance at all should be avoided. The contractor should identify his or her insurance company, if asked, and it should be contacted to establish that the contractor is adequately covered including responsibility for any sub-trades that might be engaged. Contractors should carry both property damage insurance and public liability insurance and should be paying into Workers' Compensation for similar reasons. Experienced contractors also carry bonds to guarantee that the job will be completed. If the construction work involves very large amounts of money, a lawyer should be consulted. All of the above should be covered clearly in the contract.

Is the contractor available? Contractors may be too busy to take on any new work for a good part of a year. It is always advisable to check at the outset to see if they will be available when they will be needed.

Finalizing the Price

Competitive bids, in writing, should be received from at least three different contractors. Each contractor should have a copy of the same drawings and written requirements. Each contractor should also have a written statement outlining general conditions and any special requirements:

- the deadline for submitting the written bid;
- the date the work will be able to start;
- the date the job is to be totally completed;
- whether or not water, power, washroom facilities and parking will be supplied;
- whether or not the building will be vacant or in use;
- hours of the day when work will be allowed;
- maintenance of clear unobstructed passage to the door(s) of the store and building;
- daily and final clean-ups, as well as general removal of debris;
- equipment storage;
- security arrangements;
- any requirements or restrictions regarding temporary signage;
- and any other special conditions.

While a good contractor would normally visit and inspect the site prior to establishing the price, it is a good idea to require this in the written statement. If the contractor suggests additional work, the bid for that should be prepared separately. The final selection is usually made by throwing out any excessively low or high bids and deciding among the mid-range by using the considerations of quality listed above.

Preparing the Contract

Basically a contract is a legal agreement clearly defining mutual obligations. While many contractors have a standard form, consultation with a lawyer is advisable. At the very least a contract should include:

- The careful referencing in the contract of all documents (drawings, written requirements, etc.) to be used for the job;
- All the same conditions and requirements outlined in the written statements regarding time, clean-up, etc., issued to the contractor to obtain his price;
- A time and payment schedule indicating how much work will have progressed by when and how much will be paid at these progress points, through to project completion. A hold-back of ten percent is required under the Construction Lien Act, and is not to be paid for forty-five days or until satisfactory completion of the work has been determined;

- A clear understanding of ownership of any existing materials, fixtures, etc., that will not be re-used and, how and where they are to be stored or turned over;
- A clear procedure for reviewing any materials, finishes, colours, fixtures, etc., to be supplied by the contractor for the job;
- A precise list and description of all insurance, Workers' Compensation payment requirements and bonds the contractor is expected to carry.

A review of property and business insurance for any pertinent clause regarding construction, increased hazards and improvements of the property prior to signing any construction contract is also advisable.

A restoration of commercial buildings in Kingston, before (r), after (lower r) and during construction (lower l).

Starting the Construction

On or before the first day of work, it is a good idea to have a meeting of all involved in the facade improvement on or near the site of the work. The meeting should be attended by the contractor, the supervisor and/or foreperson, the architect, and anyone else who will have direct dealings with them (e.g., a store manager or assistant if the store will be in operation during construction). At this meeting, timetables for the progress of the work, sample reviews, site inspection and payments should be reviewed. Any problems should be dealt with immediately to avoid delay. This meeting is also important for everyone to get to know each other and to set up a good rapport.

Review of Samples

In order to avoid costly misunderstandings and delays, materials, finishes, colours, fixtures, etc., should be reviewed as to their suitability and consistency with the original intentions. This is done by reviewing samples, drawings and catalogue literature produced by the manufacturer or supplier, and supplied to the owner for review sufficiently in advance of them being ordered for installation.

Construction, Inspection and Completion

Good contractors appreciate the presence of the owner and/or architect on the construction site while work is in progress, but not every minute of the day. The best time to have a good look around is either at the start or at the end of the day. Problems, if any, should be identified and solutions worked out as soon as they occur. Good workmanship should also be noted, whenever possible. Here too, contractors and their crews will care more, if they believe the owner is interested, appreciative and cares about the quality of their work.

If the work requires a building permit, the local building inspector will also visit the construction site. Inspections can take place randomly, at the completion of specific parts of the work and at overall completion. These inspections are meant to ensure that the work conforms to the approved plans and to the Building Code. The local building department should be contacted to determine what inspections will be required and to arrange when they will occur.

When the work is done, a careful inspection should be carried out by the owner, as well, to confirm that the work has been satisfactorily completed. At this point, the next to last payment is made to the contractor. Any monies still owing, less 10 per cent of the total contract price, are paid. This 10 per cent holdback is required by law (Construction Lien Act) and it protects owners and subcontractors. A lien is a legal claim which prevents the property from being sold or mortgaged, holding it as security for the contractor's debts. The 10 per cent holdback protects owners against liens that can be registered on a property by subcontractors (including most suppliers) who may not have been paid by the contractor.

After the required holdback period of forty-five days has elapsed, owners or their lawyers should check the land registry or land titles office for any liens registered on the property. If there is a lien, no payments should be made until notice has been received enduring that the lien has been properly and fully discharged.

In addition, no final payments should be made or completion certificates signed that releases the contractor from further responsibility until all the work in all its detail is completed.

6. Getting It Done—The Municipality

The municipality can set the climate for facade improvement and can set the ground rules for coordinated efforts by property owners. The development of facade improvement guidelines for the commercial area, and supporting municipal policy and regulations, along with the expenditure of public funds for improvements to public areas can encourage private sector action.

Land Use and Circulation Planning

At the most fundamental level, the municipality contributes to the health of the commercial area by legislating appropriate arrangements of land use and circulation through its offical plan and zoning by-law, and by providing roads and other services.

The municipal official plan and zoning by-law can be used to support the notion of a cohesive commercial area of the type described in the handbook, or it can undermine it. Policies and regulations which allow commercial development under any conditions may not support the health of the whole. The official plan policies should encourage appropriate uses and discourage the inappropriate. The official plan may also identify the commercial area as the primary commercial centre of the municipality or neighbourhood, and may provide that other commercial developments within its sphere of influence play a supportive, rather than a competitive role.

Both infill buildings and larger new developments can be regulated under the Planning Act, 1983, through zoning by-laws to regulate floor area, height, bulk, location and a variety of other physical characteristics. These provisions should ensure that new development will enhance, rather than disrupt the integrity of the whole commercial area. Methods of achieving this goal are: that buildings be built up to the property line or adjacent to their neighbours;

Municipal Tools For Commercial Area Revitalization

Official Plan
Sets goals for land-use, circulation, density

Zoning By-law
Translates general goals into specific requirements to be met

Streetscape Improvements
Up-grades public right-of-ways

Facade Study
Encourages and sets guidelines for private improvements

that they conform to the range of heights associated with the area; that they use the sidewalk as the main means of customer entry; and that they present a facade to the street with appropriate signage, storefront display windows, and upper storey windows.

New development, either infill or growth on the edges of the commercial areas, can support the continuity and add to the quality of these areas (Toronto).

Development Under the Ontario Heritage Act

The Act enables municipalities to designate properties of historic or architectural value or interest, individually or in groups in order to provide a measure of protection against demolition or unsympathetic alterations. Sometimes even the most modest structure is important to the provincial heritage, and designated properties and districts are now found in every part of the Province.

Designation does not prohibit alterations to a property. It simply provides a process to ensure that changes respect the heritage value of what exists. In practice the owner of a designated property is not permitted to alter that property in a way that is likely to affect the reasons for designation without first obtaining the consent of the municipal council, usually with the advice of the Local Architectural Conservation Advisory Committee (LACAC). The LACAC advises and assists the municipal council on these and other heritage conservation matters, as well as engaging in many related activities.

This building in Stratford, designated under the Ontario Heritage Act, was restored with a grant from the Ontario Heritage Foundation.

Further information regarding the Ontario Heritage Act can be obtained from the LACAC (usually accessible from the Municipal Clerk's office) or from the Heritage Branch of the Ontario Ministry of Citizenship and Culture.

Streetscape Improvements

Besides fulfilling a planning and regulatory role, the municipality can undertake improvements to public areas, like sidewalks and streets. Its responsibility is to provide safe and efficient vehicular circulation and equally, to provide a safe and attractive pedestrian environment: the vital link between the shops and buildings of the commercial area. Municipalities wishing to enhance the viability of their shopping streets have been re-constructing sidewalks, installing street trees, and placing co-ordinated street furniture, such as lamp standards, benches and litter containers, throughout their commercial areas. Examples of what can be done, as well as methods of getting it done, are discussed in the Ministry's publication: **Planning and Design for Commercial Area Improvement**, 1985. Streetscape improvements require a detailed comprehensive plan to guide implementation. The plan, usually prepared by the municipality, or by a consultant, will illustrate not only the full range of improvements to sidewalks and parking areas, etc., but also the phasing of those works. Similarly, when facade improvement activity is contemplated in the commercial area, the municipality on its own, or in cooperation with a BIA, may wish to assist and encourage property owners by having a facade study prepared. Ideally a facade study should be prepared in conjunction with a streetscape plan, so that they complement and reinforce one another.

Streetscape improvements enhance public areas for pedestrians (Coburg).

The Facade Study

The purpose of the facade study should be to establish common design guidelines which would be followed during improvements to each facade. The guidelines should help owners make individual facade improvements which are part of a visibly unified commercial area, while maintaining their facade as attractive and functional in its own right. The design guidelines should be developed to reflect the physical and social character of a particular community. The study process is discussed below and is a general direction which should be modified to adapt to the particular circumstances of the community.

A commercial area in Port Colborne before (r) and after (l) streetscape and facade improvements.

The three major study components which are common to any facade study are:

- An inventory of existing facade conditions, potential and problems;
- A set of design principles which should be common to the design of all facade improvements;
- A demonstration design for the whole street, which would incorporate guidelines for each facade, for each block and/or for the commercial area.

The First Step

Before starting a facade study, the need for and commitment to a study should be agreed upon by the main actors: the downtown business community or BIA, the appropriate elected and appointed municipal officials, and the public. This agreement might best be obtained by holding a public meeting to present and discuss the purpose of the study. It should be made clear that such a study, along with other commercial revitalization efforts, is intended to benefit the entire community, since commercial areas represent a major tax base, a significant employment generator, and they are an essential community resource for many social and cultural activities.

Who Should Be Involved?

Since the commercial area affects the entire community, the municipality should take a leading and positive role in the facade study. The BIA, if one exists, will be most directly affected by the guidelines, and will have extensive knowledge about current problems, ideas for the future and perhaps knowledge and records from the past.

Local organizations, such as the LACAC, will also have knowledge of the existing sources of local commercial, social and architectural history as well as their own views on these matters. The LACAC should be consulted since it will also play a direct role if any building designated under the Heritage Act is involved.

Steering the Study

The municipality, the BIA and other relevant organizations should elect or appoint a small steering committee to be responsible for the direction of the study. Public meetings should be held at specified periods during the process to inform the public. To avoid frustration, disappointment, confusion and unnecessary delays, it is essential to clarify lines of authority and responsibility.

A Project Co-ordinator

If the facade study is part of a larger commercial improvement effort, simultaneously involving such things as the organization of merchants into a BIA, a new streetscape plan, downtown promotion, economic restructuring and the construction of new buildings, then the municipality should consider hiring an on-site project co-ordinator. This type of position has been used effectively by many municipalities in the United States, as well as a number in Ontario*. The co-ordinator offers, along with the obvious advantages of greater co-ordination and efficiency, the potential for greater and more consistent guidance and advocacy for the commercial area.

If the facade study is not part of a greater effort, or does not warrant a special position, an existing municipal staff member should be given the role of study co-ordinator, acting as the link between the steering group and the study team. A BIA staff person may also be involved. An outside consultant experienced in design, public relations and co-ordination could also be considered.

The Study Team

While many municipalities have sophisticated technical, financial and legislative tools, most are unlikely to have the urban design and architectural skills required for a facade study. If this is the case, professional consultants may be used to assist with or prepare the study. If in-house staff does not undertake the work, consulting firms with an understanding of both rehabilitation and urban design (two quite different skills) should be selected. The terms of reference should clearly state:

- The general expectations for the study;
- The time-table, including any necessary steering committee meetings, public meetings and deadlines;
- What will or will not be provided for their use (such as base maps, photographic records and surveys);
- The final product: concepts, guidelines, by-laws;
- Fees.

Define the Study Area

In most communities the study area will correspond to the boundaries of the BIA, as well as the boundaries of the streetscape plan, if one has been undertaken. The area designated for facade study should be large enough to ensure a visible impact, but not so large that the study is spread too thinly, resulting in insufficient attention to detail. The area should include those properties whose owners are or could become committed to establishing a cohesive and attractive commercial area and are likely to make the improvements suggested in the guidelines. It should not include properties that are not part of the pedestrian-oriented, compact commercial zone. Within the boundaries thus established, a detailed and graphically clear base map should be prepared which includes information on property boundaries, building outlines, trees, curbs and pavements. Just as important, but usually involving more preparation, is a careful and comprehensive photographic survey of the building facades in the study area, followed by reasonably detailed drawings of the existing facades.

Municipal Facade Study

* Reference: Peter Barnard and Associates, **Towards Excellence in Downtown Management**, Ministry of Municipal Affairs, 1983.

Identify Potential and Problems

While commercial areas across the Province have many common characteristics, each is unique in some way. That uniqueness, that special quality which sets one apart from the others, forms a large part of their potential. While much of that uniqueness may be created by topographical features and building locations, a great deal is also established by the building facades.

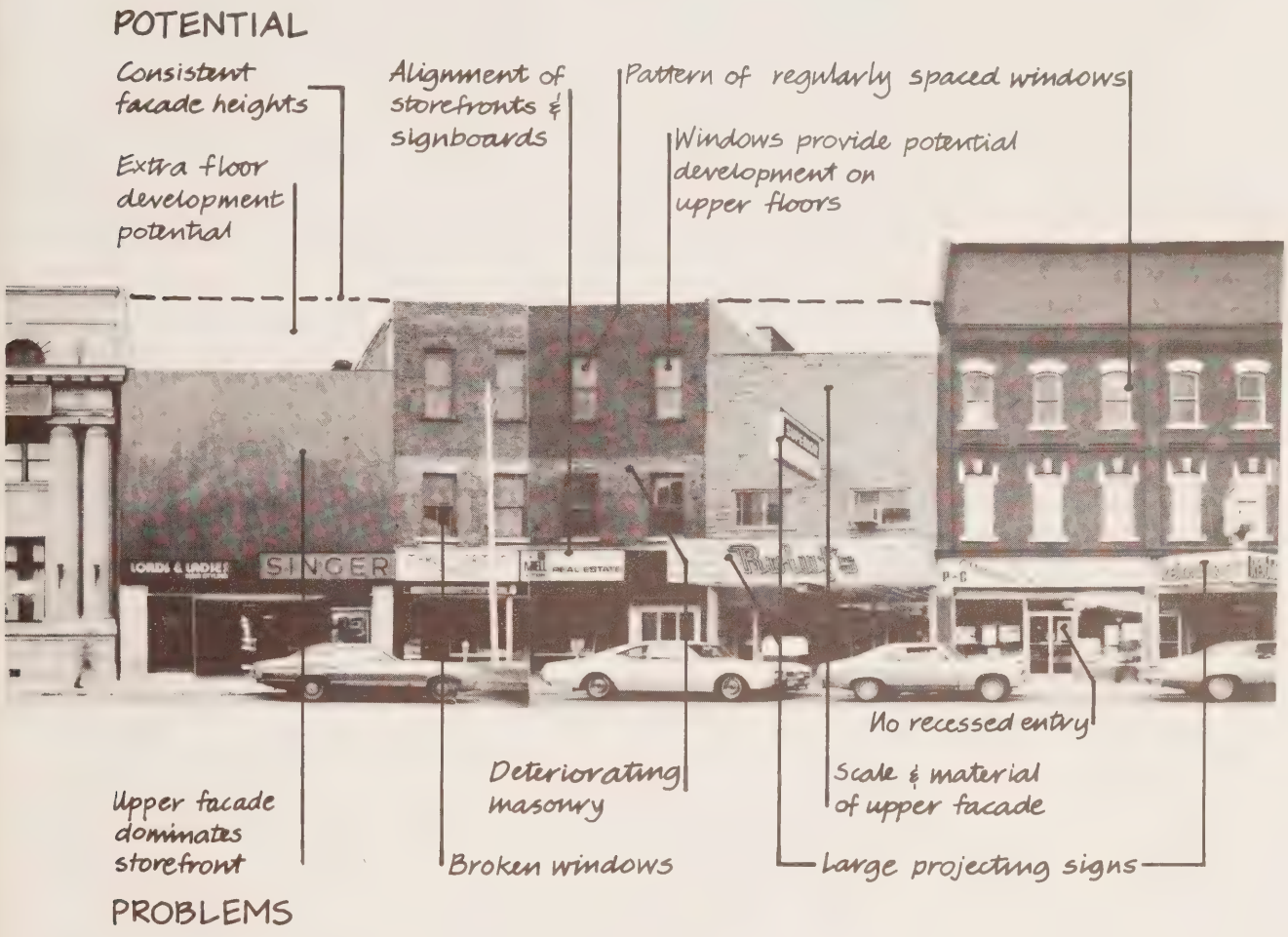
Some commercial areas may have a tradition of using particular facade materials, such as shingles and wood siding in Kapuskasing. A facade study should encourage the development of this kind of tradition.

An inventory of the physical characteristics related to facades should include:

- building forms,
- building types (use),
- building materials,
- architectural styles,
- window types,
- door and entrance types,
- awnings,
- colonades and balconies,
- special features, such as towers, turrets and bay windows,
- uses above the storefronts, such as housing, meeting and/or concert halls, artists and craft studios, storage and vacant space,
- signage types,
- lighting types.

An inventory of physical characteristics would not be complete without the identification of problems with existing physical features (notably their state of repair) and potential. The use of the building, its location and design qualities should also be considered.

An example of some potential and problems.



Develop Goals

Goals should express the ambitions the community has for its commercial area, stated broadly enough for them to remain in effect for some time without becoming obsolete. However obvious they may at first seem, it is important to set them out as clearly as possible.

Most communities will have one goal in common: "to strengthen the role and function of the commercial area". Goals should encompass all the actions the community would like to undertake and should not only be directed at facade improvements.

Finally, the goals should flow from the problems and/or opportunities identified earlier. Some examples:

1. Encourage a strong commercial core area.
2. Strengthen image of commercial area through its architecture.

Develop Design Principles

The design principles begin to establish the way in which the goals can be accomplished. The principles should reflect the key physical attributes of the commercial area, such as human scale and compactness. They should support municipal policy and encourage improvement within the existing commercial area. The principles should also reveal the particularities of the architectural styles in a community by setting out guidelines on building form and alignment of building parts, such as windows and doorways. Depending upon the community, more attention may be given to certain aspects instead of others.

Example of Design Principles:

- Support street activities, such as window shopping and walking under cover.
- Encourage a mix of uses with shops at grade and other uses above, such as housing, offices and supplementary retail.
- Ensure that each building is accessible directly from the sidewalk.
- Develop facade designs with good proportion and human scale.
- Use materials of enduring quality and fine detailing.

Prepare a List of Possible Actions

The principles will be achieved by means of alternative physical improvements and actions. This is a point where the community should consider the broad range of improvement options. The scope of possible facade improvements is very large, ranging from simple painting to major reconstruction. Imagination and creativity have a major part to play in developing ideas that are interesting and innovative, as well as practical and appropriate. Using one of the earlier examples, the following actions could be developed.

Example of Possible Actions:

- Location on the facade and vertical dimensions for signboards could be fixed for all future signs;
- Deteriorating masonry walls could be repaired/repointed to re-establish their quality;
- Windows on upper floors could be repaired (or replaced if necessary);
- Upper floors could be developed for residential or secondary commercial uses;
- Large projecting signs could be removed.

To ensure that this phase is not prolonged, a cut-off point should be established and met. As with the construction period, the planning stage must be realistically limited, in order to move the overall project to completion.

An alternative demonstration design.

Prepare Alternative Demonstration Designs

Once the range of potential commercial facade improvements has been developed, guidelines should be prepared which set out how the design principles will be achieved. These guidelines will provide the background for demonstration designs of the various proposals for the facades. The drawings should show the facades of all the buildings on a street and should reveal how the various improvements would fit together, thus visually providing a way of testing their feasibility. Detail is not important at this stage. Effort should be concentrated in preparing several overall demonstration designs for the commercial area, rather than working out the details for a particular storefront.

In keeping with the attempt to limit the planning stages, the number of demonstration designs should be kept to a minimum. Three distinct alternatives should give the community sufficient information to consider.

Design Themes

Many municipalities have used the idea of a "design theme" as a convenient term to understand and develop a cohesive picture of the commercial area. At worst, a "design theme" can result in the selection of an inappropriate and exotic design style, such as that of a Bavarian village, resulting in the application of overly theatrical details to all the storefronts. At best, a design theme will incorporate the design principles, using quality materials, coordinated colours, consistency in detailing and in the arrangement of windows, doors and other components.

Prepare Guidelines and Final Demonstration Design

The alternative demonstration designs should be evaluated according to the criteria below, and the most suitable design (or a composite design) should be selected:

- Suitability: how well does it fit the objectives and goals established at the outset of the process; will it solve some of the community's problems and will it utilize available potential?
- Cost: how much will the improvements cost; is phasing possible and what are the priorities?
- Timeframe: how soon can the facade or a substantial number of facades be improved? It is clearly more advantageous to see tangible results sooner, rather than later.

Once the most appropriate design has been selected, the final guidelines and facade drawings can be prepared.

Three types of guidelines could be drafted: area guidelines, block guidelines and/or building guidelines. The area guidelines should take the form of a series of generalized recommendations for improvements applicable to all the buildings in the study area, or for identifiable blocks within it.

If sufficient resources are available, more specific recommendations for individual buildings can also be prepared. These guidelines will be used by the merchants or owners as the basis for improvements to their individual storefronts. They will form a framework within which the specific needs of a building (as decided by the owner or merchant) can be addressed in ways that are part of an overall co-ordinated approach. If this framework is respected, the improvements will help not only the individual stores, but also the entire block and street.

Implementing the Study's Recommendations

The municipality may want to initiate and adopt bylaws to support the proposed improvements, including a sign control by-law, a property maintenance and occupancy standards by-law and site planning controls under the Planning Act. Any needed changes to the municipal zoning by-law should also be carried out at this time.

The BIA can also play a major role in promoting the use of the facade improvement guidelines through its presence in the area and communication with its members. The municipality can also promote use through the local media and by holding public meetings to encourage discussion and information flow.

Evaluation of facade improvements is as important as the original planning and implementation. Once a number of initial improvement projects have been completed and in use for a year, the community should evaluate their impact on the commercial area. An evaluation is basically a review to determine if the improvements have lived up to expectations based on the originally stated goals and objectives of the facade study. It should cover the following aspects:

- use of guidelines and degree of co-ordination;
- visual appearance: wear and tear, use and abuse;
- durability of materials;
- maintenance problems;
- cost of construction and maintenance.

The information obtained from such an assessment can be used in many ways:

- changes can be made to the facade guidelines and/or development regulations;
- unforeseen problems can be corrected;
- the experience can help make future improvements better meet the community's needs.

Other Ways to Encourage Good Design

There are a number of ways to encourage good design that do not require by-laws, development agreements and regulations. An increase in the general awareness of the role of facades in increasing returns to the owner, or in their value to the commercial area as a whole, will naturally help the cause of good design. This can be accomplished in a number of ways. The LACAC, BIA, major local industries and the municipality could singularly or together co-ordinate and promote activities to raise the public and merchant's awareness of the importance of commercial facades in the following ways:

- annual design awards (only one per year) for the best rehabilitation, signage and/or display windows. These awards should be highly publicized and promoted. The actual award should be a plaque or similar object etc., that could be displayed by the owner in his/her storefront. The award should also include recognition (if applicable) of the designer and/or contractor.
- a regular column in the local newspaper could be established where local facades are highlighted with photos of buildings, streetscapes, intersections, etc. (perhaps with a photo of the same view before it was renovated), in combination with interesting stories about their social and architectural history.

- the provision of design clinics where architects could provide design and improvement advice to merchants. The duration of the clinics would, of course, depend on the amount of funding available. The clinics should best take place in a local store and should also be well publicized.
- displays of old photos and, if available, original drawings of early facades could be set up and rotated between libraries, city hall, or even set up in a display window on the street. Such displays should be properly advertised, well maintained and periodically changed.
- the production of a small pamphlet describing an appropriate self-guided walking tour, illustrated with examples of good facades. These pamphlets could be sold at a low price or made available free at area stores.

This handbook has presented information which will hopefully expand or reinforce the reader's knowledge of how commercial facades work both individually and collectively. With this knowledge, improvements to these facades can take place using the existing assets of the facade and its setting. While many commercial facades may require at least minimal renovation at some time, all facades require on-going maintenance and care to perform to their fullest potential.

Port Hope.

For further information,
please contact:

Community Renewal Branch
Ministry of Municipal Affairs
13th Floor
777 Bay St.
Toronto, Ontario M5G 2E5
(416) 585-6013

Glossary of Terms

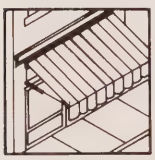
Aggregate: granular material (sand, gravel, crushed stone, etc.); frequently mixed with cement to make concrete or mortar; added for strength and/or improved appearance.

Alkyd Paint: an oil-modified paint which is harder and dries faster than oil paint, has good self-sealing properties, weather resistance and gloss retention, and darkens slightly with age.

Anodized Finish: an oxide film applied to the surface of metal for better corrosion resistance, hardness and/or architectural colour requirements; most durable finish for aluminum, but can be scratched.

Arcade: an arched passage, either freestanding, attached to a wall, or running between or through buildings; if columns are used to support the arches, it is often called a colonnade; some arcades have glass and steel arched roofs.

Arch: a curved structure used at the top of doorways, windows, arcades etc.; can be used to carry weight of walls to either side of openings in walls.

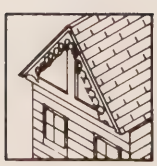


Awning: an adjustable, roof-like covering fitted over windows, doors, etc. to provide shelter from the sun, rain and wind, and for its decorative and advertising potential.

Balcony: a platform projecting from a building wall, supported from below or cantilevered, and enclosed with a railing.

Baluster: a short vertical member used to support the rail of a balcony, terrace, staircase, etc.

Balustrade: an entire railing system including the top rail, its balusters and sometimes a bottom rail, used on a balcony, terrace or staircase.

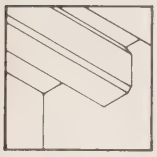


Bargeboard: a decorated board which hangs from the projected end of a roof to screen the projecting roof timbers.

Bas-relief: a carving, sculpture or casting where the figures project slightly from the background plane.

Bay: a vertical division of a facade or a structure division of a building, marked by column spacing, roof compartments, windows, etc.

Bay Window: a projecting, windowed bay beginning on the ground floor and sometimes embracing several storeys; unlike an oriel window its weight is carried on foundations outside the wall line; can be square, angular or curved (bowed) in plan.



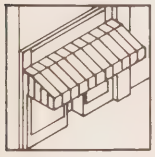
Beam: a horizontal structural member usually wood, steel or concrete which supports vertical building loads.

Bid: a contractor's offer to perform the work described in a contract at a specific cost.

Bonding Agent: a chemical adhesive or other substance applied to a surface to unite it with a succeeding layer of material; frequently used in concrete work.

Boomtown (front): see False-front.

Bracket: an angular support under eaves, small canopies, oriel windows and other overhangs; sometimes forming part of cornice; can be more decorative than functional.



Canopy: a permanent fixture designed to shelter pedestrians and display goods from adverse weather conditions; a fixed awning.

Capital: the top section of a column or pilaster; often quite elaborate; shapes vary according to architectural style.

Cast Iron: a hard, brittle iron alloy easily cast into moulds and used extensively in the 19th century for a large range of building products.

Caulking: a soft, putty-like material usually having a silicone, bituminous or rubber base, used to seal cracks, fill joints, prevent leakage and/or provide waterproofing; sometime referred to as mastic.

Cladding: a protective surfacing material (wood, aluminum, etc.) applied over the structural members and sheathing; also referred to as siding.

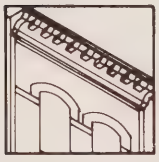
Colonnade: a row of columns carrying either an entablature or arches; either freestanding or in front of a wall often creating a passage; if the passage is arched it is often called an arcade.

Column: a relatively long, slender, vertical support; shapes vary according to style but almost always consist of a capital at the top, a long shaft in the middle and often a base at the bottom.

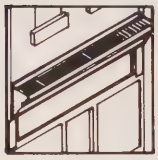
Concrete: a composite material consisting essentially of cement, water and aggregate (usually sand and crushed stone) which is poured into moulds and hardens into a solid.

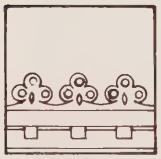
Coping: a brick, stone, precast concrete, copper or specially coated metal covering used for the top of a wall (especially parapets) as a protection from rain and other weathering; usually with an overhang.

Corbel: masonry projecting from a wall face, either to support other projections above (such as cornices, window hoods, oriel windows, etc.) or for purely ornamental reasons.



Cornice: an ornamental moulding along the top of an entablature or wall; on outside walls of commerical buildings cornices can top the entire facade (Building Cornice) and/or the storefront (Storefront Cornice); used to throw or direct water away from the wall below and to visually cap a wall or section of a wall.





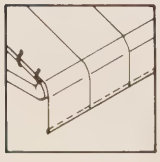
Cresting: an ornamental finish along the top of a roof, wall, etc.; generally rhythmic, highly decorative and often perforated.

Decorative Label: see Hood Moulding.

Decorative Louvre: horizontal, overlapping slats framed in a window or door, designed to admit air and light while blocking vision and excluding rain.

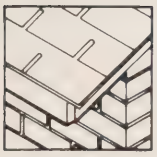
Dormer (window): a window projecting from a sloping roof, usually provided with its own roof.

Downspout: a vertical pipe, often made of sheet metal, which conducts water from a gutter or roof drain down to the ground or a drainage system below grade.

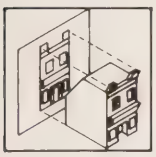


Drop Flap: the overhanging section of an awning, sometimes used for advertising.

Dry Rot: timber decay caused by a fungus capable of carrying water into the wood it infects; frequently caused by inadequate ventilation.

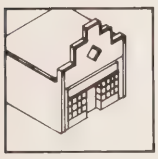


Eaves: the lower edge of a roof which projects beyond the face of a wall, throwing water away from the wall.



Elevation: a drawing showing an external face of a building.

Entablature: a horizontal moulding in classical architecture, made up of architrave, freize and cornice which rests horizontally upon columns or pilasters.



False-front: a front wall that extends above the roof of a building, hence masking it with a more imposing facade.

Finial: a pointed ornament which crowns the apex of a gable, pediment, tower, spire, etc.; often used at ends of cornices.

Fire Separation: usually a floor or wall without openings, having a sufficiently high fire endurance rating to act as a barrier against the spread of fire within a building.

Flashing: a protective building device, usually a thin impervious sheet material, used to cover open joints in exterior construction to prevent water penetration and/or to intercept any water that might enter, draining or directing it back out; many materials are used for flashing.

Furrings: spacers (wood strips, metal channels) which are fastened to walls, ceilings, etc. in order to level the finished surface.

Gable: any basically triangular-shaped, upper part of a building wall, usually under a pitched roof; sometimes upper walls topped with stepped parapets are referred to as gables or stepped gables.

Glazer, or Glazier's Point, or Brad: a device used in wood windows; usually a small metal triangle or headless nail, buried in glazing putty at the edges of a pane of glass, used to hold the glass in place.

Glazing Bar, or Muntin: a small, slender secondary vertical or horizontal framing member within a sash frame which carries and separates panes of glass.

Grade: ground level at the outside wall of a building.

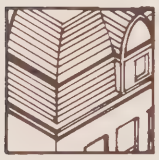
Hood Moulding, or Decorative Label: a projecting moulding over a window or door; used to throw off rain water or for purely ornamental reasons.

Infill: new building(s) constructed on an empty or cleared site situated between or adjacent to existing buildings.

Keystone: a wedge-shaped block in the top centre of a masonry arch, or similar elements used as ornaments above doors and windows; often carved or similarly decorated.

Latex Paint: a low gloss, non-flammable, quick drying paint for use on exterior wood, masonry, etc.

Lintel: a horizontal structural member (beam) that supports the load over an opening, such as a door or a window.



Mansard Roof: a roof with a steep lower pitch (or slope) and a flatter pitch above; popular in Second Empire Style.

Masonry: bricks, stone, concrete blocks, or similar building materials, or combinations of these, bonded together with mortar to form a wall, pier or similar mass.

Medallion: an ornamental plaque, usually circular or oval; surface can be flat, concave or carved in relief representing a figure, profile, flora, etc.; usually made from either plaster, cast iron, cast aluminum, or decorative pressed metal.

Mortar: the binding agent in masonry construction, consisting of a mixture produced from prescribed proportions of cementing agents, fine aggregate and water; it is trowelled in place while wet, and gradually sets hard.

Moulding: a shaped band or strip of decoration intended to add outline or contour; can be made from many materials.

Mullion: a vertical member dividing window frames.

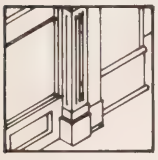
Oil-based Paint: a durable, penetrating paint when brushed on, providing good adhesion, elasticity and resistance to blistering on wood and other porous or painted surfaces.

Oriel Window: a projecting, upper-storey window; if it projects far, its weight is carried back to the wall by corbels or brackets; can be either square, angular or curved (bowed) in plan.

Parapet: a portion of a wall that projects above a roof; sometimes serves as a guard at the edge of a balcony or roof.

Party Wall: a wall, usually structural, situated on the dividing line between both properties; used jointly by owners of adjacent buildings under easement agreement.

Pediment: a wide, low-pitched, ornamental gable topping a facade, doorway or window.



(Storefront) Pier: a rectangular or square structural masonry support between openings; at times, the outside face of a party wall.

(Storefront) Pilaster: a vertical, strip projecting slightly from a wall, usually in the form of a half column or half pillar (square column); can be structural or purely ornamental.

Pitched Roof: a roof with two slopes which meet at a central ridge, or less commonly any roof with a surface slope greater than 10 degrees.

Porcelain Enamel: a thin coating of glass and colour oxides fused to steel or aluminum under extreme heat producing a panel with hard, impervious finish; these panels are often used as cladding for new or existing walls and for architectural graphics (including signage).

Post: any vertical member supporting a vertical and/or lateral load; steel, concrete, round wood or stone posts are often referred to as columns.

Pressed Metal: sheet steel or other metal compressed between dies to carry a pattern or other embossed image, generally used as a decorative finish.

Primer: a base coat of paint used as a preservative, sealant and filler on wood, plaster and masonry, and on metal surfaces to inhibit rust and increase adhesion of finish coats of paint.

Putty: flexible compound, commonly a mixture of powdered chalk and linseed oil, used to seal wood prior to painting and glazing in windows.

Quoins: projecting blocks of stone or brick used to accentuate the corners of a building.

Sandblasting: cleaning a surface (masonry, metal, etc.) with sand under high pressure to remove dirt, rust or paint, or to intentionally decorate it with a rough texture or by exposing underlying aggregate; sometimes referred to as dry grit blasting.

Sash: a frame that holds glass in a window; located in the larger window frame a sash can slide up and down on pulleys or back and forth on tracks, pivot or swing out or at times can be fixed.

Sheathing: a covering (usually wood boards or plywood) installed over exterior structural members which serves as a stiffener and a base for subsequent wall or roof cladding.

Siding: see Cladding

Signband, Signboard: a prominent exterior display surface used for identification and advertising, located between the storefront windows and cornice; often signboards are designed together with storefront cornices.

Silicone Coating: chemically unreactive film used as a sealant and a water repellent (i.e. not waterproof).

Sill: a horizontal bottom member of a window or door frame.

(Building) Skin: the outer layer or facing material of a building, not a structural part.

Spalling: the outer flaking of brickwork, stone and concrete due to expansion forces of frost, chemical action or building settlement; the expansion of some mortars used in repointing can also cause spalling.

Sprinkler System: a network of branching water pipes in the ceilings of a building, terminated by sealed sprinkler heads which open at a predetermined temperature and are capable of extinguishing or controlling a fire until help arrives.

Structural Glass Veneer: a highly polished, opaque glass usually 8-9 mm thick (5/16 inches - 11/32 inches); usually applied as panels (or sheets) directly to a building with an adhesive; sometimes referred to by trade names such as Carrara or Vitrolite; it was popular in the 1940-40's and it is no longer manufactured, but matching material can be obtained from some window glass distributors.

Stucco: a textured plaster finish composed of Portland cement, lime, sand and water.

Subfloor: in wood construction, a rough flooring laid directly on the structural members to act as a base for the finished floor; in concrete construction, a structural slab finished with a topcoating of concrete or other materials.

Terra Cotta: hard, fired, fine-grained clay ranging in colour from yellow to reddish brown, moulded for cladding and a wide range of ornamental work; very popular in the later 19th and early 20th centuries; clear or coloured, opaque glazes were often used in many colours; also used as tile on roofs, floors and walls.

Transom (Window): an operable or fixed window above door(s) and/or windows.

Trefoil: a three lobed ornamental pattern used in the top of gothic arches, windows or in cresting; resembling three leaves or the flower of a trillium.

Turret: a small tower, usually round or polygonal and built out from a building corner.

Urban Design: the arrangement or composition of forms (buildings, landscape features, etc.) and spaces (streets, squares, parks etc.) in a community based on principles related to visual order, environmental conditions, social requirements and economic feasibility.

Veneer: a thin uniform layer of facing material such as brick, marble, stone, porcelain enamel, etc. which provides a decorative, durable surface over a wall's structural framework.

Annotated Bibliography

General

City of Oakland Planning Department. Rehab Right. City of Oakland Planning Department, Oakland, 1978.

Many problems associated with exterior (and interior) renovation work are thoughtfully but concisely addressed, accompanied by practical and imaginative solutions. Though the book is primarily directed at domestic architecture in the Oakland area, many of the problems dealt with are neither unique to the area nor related to the building uses. Particularly helpful are the sections dealing with wood repair and replacement of decorative features.

The Heritage Canada Foundation. **Reviving Main Street.** University of Toronto Press, Toronto, 1985.

A detailed overview of revitalization in Canada, offering practical advice on a variety of concerns including organizing merchants, improving building facades, erecting appropriate signs and promoting downtown business.

Building Research/Identifying Styles

Blumenson, J.J. **Identifying American Architecture: A Pictorial Guide to Styles and Terms,** 1600-1945. American Association for State and Local History, Nashville, 1977.

Well illustrated catalogue of the architectural details, elements and forms to identify 39 distinct styles, many of which are the same or similar to those found in Ontario.

Carter, M. **How to Research a Building in Canada.** Parks Canada, Ministry of the Environment, Ottawa. n.d.

Detailed guide for sources and special problems.

Carter, M. **Researching Heritage Buildings.** Parks Canada, Ministry of the Environment, Ottawa, 1983.

Very basic guide to building research in Canada, including commonly asked questions, a list of sources of information and suggestions for evaluating material.

Parker, E. **A Guide to Heritage Structure Investigations.** Ministry of Culture and Recreation, Toronto, 1979.

Things to consider when investigating a heritage property for re-use or upgrading, including research and evaluation of the structure and site, formulating a plan and advice on financing.

Parks Canada. **The Buildings of Canada.** Ministry of the Environment. n.d.

Concise guide to identifying architectural styles in Canada.

Colour

American Life Foundation. **Exterior Decoration.** American Life Foundation Study Institute, Watkins Glen, N.Y., 1975.

Includes an essay on exterior colouration and numerous colour plate illustrations and paint samples from the Victorian era.

Bicknell, A.J. **Victorian Village Builder.** The American Life Foundation and Study Institute, Watkins Glen, N.Y., 1976.

Forty-two colours used in the Victorian period (c.1870's) are reproduced as are some ceramic tile colours and patterns. (The book is primarily a republication of an 1872 pattern book—a companion volume to Victorian Architecture—featuring elevations and plans for many Italianate and Second Empire Style buildings, including storefronts.)

Cambridge Historical Commission. **Paint Colours for Your 19th Century House.** Cambridge, Mass. n.d.

Colour selections based on those prevalent for Greek Revival, Italianate, Mansard, Queen Anne and Colonial Revival styles.

Technical Dossier Series, no. 7: **Historic Paint Colours.** The Heritage Canada Foundation, Ottawa, 1981.

Collection of articles, documents and bibliographies on paint colour research, reproduction, preservation, early practices, removal of old paint layers and application of new paint.

Hanson, S. **Preserving and Maintaining the Older House.** McGraw-Hill Book Company, New York, 1983.

Extensive technical information on residential renovation, including chapters on paint colour selection for various architectural styles.

Moss, Roger. **Century of Colour.** American Life Foundation, 1981.

Practical information on choosing and matching authentic paint colours (based mainly on domestic styles of architecture from roughly 1820 to 1920). Includes 100 plates of original colours and 40 "heritage colour" paint chips.

Wilkinson, J. G. **On Colour.** London (U.K.), 1858.

Detailed analysis of colour harmony, contrast, tone, etc., including colour compatibility charts and considerations for ornamentation and architectural style.

Communities

Hall, R. and Dodds G. **Canada: A History in Photographs.** Hurtig Publishers, Edmonton, 1981.

A well illustrated account of early life in Canada and the development of its cities.

Hill, N. **Historic Streetscapes of Huron County.** Middlesex Printing Company, London (Ont.), 1981.

Historical analysis of 16 small communities, containing town plans and streetscape sketches to illustrate the descriptive text.

Weaver, J. C. **Hamilton: An Illustrated History.** James Lorimer & Company and National Museums of Canada, Toronto, 1982.

A well documented and illustrated account of the settlement and development of Hamilton.

Williams, O. (editor). **L.A.C.A.C.s at Work: A Primer of Local Architectural Conservation Advisory Committee Activities in Ontario.** Ministry of Culture and Recreation, Peterborough, 1978.

An inventory of many of Ontario's communities that have maintained buildings of architectural or historical significance, documented photographically and highlighted briefly in the text.

Facade Improvements/Design Manuals

Berk, E. **Downtown Improvement Manual.** American Society of Planning Officials, Chicago, 1976.

Comprehensive guidelines covering all aspects of commercial renewal and redevelopment, including practical information and design considerations for building improvements.

Collier, R. Technical Paper Series, no. 4: **Guidelines for Storefronts of Heritage Buildings.** British Columbia Heritage Trust, Victoria, 1982.

Concise introductory handbook containing design information and suggestions. Typical examples, common renovation mistakes and research advice is also provided.

Guthrie, S. **Main Street Historic District.** Technical Preservation Services, Washington, 1980.

Brief account of the mainstreet historic preservation project in Van Buren, Arkansas, focussing on storefront rehabilitation/restoration.

Mintz, N. Technical Series, no. 2: **A Practical Guide to Storefront Rehabilitation.** Preservation League of New York State, Albany, 1982.

Brief but effective guidelines covering the relevant areas of storefront rehabilitation, including benefits, storefront history and stylistic development, practical planning steps, maintenance and signage.

Shearer, Wendy. **Design Guidelines for Building Facade Improvements.** City of Kitchener Department of Planning and Development, Kitchener, 1984.

Brief description of a facade study, containing general guidelines and specific illustrated recommendations for 16 commercial buildings in Kitchener's downtown core.

Tennessee Valley Authority. **Townlift: Building Improvement Manual.** Tennessee Valley Authority, Knoxville, 1978.

Well illustrated outline of improvement treatments and maintenance methods with emphasis on a sensitive approach and including a brief history of the evaluation of the Victorian downtown area.

Thompson, Berwick, Pratt & Partners. **Nelson Downtown Core Study, Volume II.** 1980.

Detailed improvement plan for Nelson's downtown core area, including a chapter on the major elements of building treatments and facade improvements.

Wise, H. and Williams, J. (editors). **Main Street, Ohio: Opportunities for Bringing People Back Downtown.** Department of Economic and Community Development, Columbus (Ohio), 1981.

Extensive overview of downtown revitalization, with a full section on facade guidelines.

Materials, Repair and Maintenance

Bracken, J. **Restoring the Victorian House and Other Turn-of-the-Century Structures.** Chronicle Books, San Francisco, 1981.

Extensive do-it-yourself technical information, well illustrated with diagrams and photographed examples.

Canadian Heritage magazine (1981-2). "Nuts and Bolts" reprints. The Heritage Canada Foundation, Ottawa.

Weaver, M. **Cleaning Masonry:** A look at water and chemical treatments. December, 1981

Byrne, R. O. **Preserving Your Metals:** Advice on their inspection and maintenance. May, 1982.

Weaver, M. **Energy Efficiency in Old Buildings:** How to keep the heat in. February, 1982

Weaver, M. **The Wood Check:** Surveying the wooden parts of your house. May, 1981

Weaver, M. **Properly Plastered:** How plaster works. August/September, 1981.

Weaver, M. **Fixing Plaster:** Repairs and replacement. October, 1981

Byrne, R. O. **On The Roof:** How to inspect and maintain it. February, 1982

Weaver, M. **Keeping It Together:** Mortars in old buildings. August, 1982

Collier, R. Technical Paper series, no. 2: **Guidelines for Restoring Brick Masonry.** British Columbia Heritage Trust, Victoria, 1981.

Concise technical paper which provides an introduction to restoration work for brick building exteriors.

Litchfield, M. **Renovation: A Complete Guide.** John Wiley & Sons Inc., New York, 1982.

A comprehensive detailed guide to renovation directed at domestic architecture, but many problems and solutions are equally applicable to commercial buildings. It is well illustrated and provides first hand information advice and many useful tips.

The Preservation League of New York State, Inc. **A Primer: Preservation for the Property Owner.** The Preservation League of New York State, Inc., Albany, 1978.

Concise, practical manual outlining basic methods of planning and carrying out modest repairs and preservation work.

Technical Preservation Services Division. **Preservation Briefs (series).** U.S. Department of the Interior, Washington.

Mack, R.C. no. 1: **The Cleaning and Waterproof Coating of Masonry Buildings.** November, 1975.

Mack, R.C. no. 2: **Repointing Mortar Joints in Historic Brick Buildings.** August, 1980.

Smith, B.M. no. 3: **Conserving Energy in Historic Buildings.** April, 1978.

Sweetser, S.M. no. 4: **Roofing for Historic Buildings.** February, 1978.

Grimmer, A.E. no. 6: **Dangers of Abrasive Cleaning to Historic Buildings.** June, 1979.

Tiller, de T.P. no. 7: **The Preservation of Historic Glazed Architectural Terra Cotta.** June, 1979.

Myers, J.H. no. 8: **Aluminum and Vinyl Siding on Historic Buildings.** October,/1979.
Myers, J.H. no. 9: **The Repair of Historic Wooden Windows.** January, 1981.
Weeks, K.D. and Look, W. no. 10: **Exterior Paint Problems on Historic Woodwork.** November, 1982.

Pictorials of Facades and Details

American Life Foundation. **Late Victorian Architectural Details.** American Life Foundation and Study Institute, Watkins Glen, N.Y., 1979.

Large collection of detailed illustrations.

Bicknell, A.J. and Comstock, W.T. **Victorian Architecture: Two Pattern Books.** The American Life Foundation and Study Institute, Watkins Glen, N.Y., 1977.

Extensively illustrated period catalogue of design details for a wide range of architectural ornaments, elements and structures in the Second Empire and Queen Anne styles.

Evans, B. and Lawson, A. **Shopfronts.** Van Nostrand Reinhold Company, New York, 1981.

Photographic essay of traditional small English shops, including some text on the problems of shop architecture and the development of styles.

Fleming, R. **Facade Stories: Changing Faces of Main Street Storefronts and How to Care for Them.** Hastings House, New York, 1982.

Series of diverse case studies showing good and bad examples of facades which have been maintained, restored, renovated, adapted or reinterpreted. An excellent source for ideas, ranging from the very simple to the complete reconstruction.

Priamo, C. **The General Store.** McGraw-Hill Ryerson Ltd., Toronto, 1978

Largely photographic record of surviving general stores in Ontario. Photos and comments cover historical development and existing conditions including vacancies, alterations and museum stores.

Signage

Communication Design Group Limited. **The Lunenburg Signage Manual.** Town of Lunenburg, Nova Scotia, 1981.

Guidelines for local commercial sign production and containing general suggestions regarding signage location, size, materials and colour.

Other References

General

Brolin, B. **Architecture in Context: Fitting New Buildings With Old.** Van Nostrand Reinhold, New York, 1980.

Canadian Heritage magazine, no. 40 (special Main Street issue), May-June 1983.

Mitchell, H. **How to Hire A Contractor.** Canada Mortgage and Housing Corporation, Ottawa, 1982.

Building Research/Identifying Styles

Kalman, H. **The Evaluation of Historic Buildings.** Parks Canada, Ottawa, 1979.

Technical Dossier Series, no. 2: **Investigation and Recording.** The Heritage Canada Foundation, Ottawa, 1979.

Colour

The Athenaeum of Philadelphia. **Exterior Decoration: Victorian Colours for Victorian Homes.** The Athenaeum of Philadelphia, Philadelphia, 1975.

Lower West Side Resource and Development Corporation. **Guidelines: Facade Renovation on the Lower West Side.** Lower West Side Resource and Development Corporation, Buffalo, 1984.

Communities

Greenhill, R., Macpherson, K and Richardson, D. **Ontario Towns.** Oberon Press, Toronto, 1974.

Hall, R. and Dobbs, G. **A Picture History of Ontario.** Hurtig Publishers, Edmonton, 1978.

Hill, N. **Building Heritage: Huron County.** Nicholas Hill, Auburn (Ont.), 1974.

Stokes, P.J. **Early Architecture of the Town and Township of Niagara.** Niagara Foundation, Niagara-on-the-Lake, 1967

Wetjen, A. and Irvine, L.H.T. **The Kirkland Lake Story: A Pictorial History.** The Town of Kirkland Lake, 1979.

Facade Improvement/Design Manuals

Mun, D. **Shops: A Manual of Planning and Design.** The Architectural Press Ltd., London (U.K.), 1981.

National Endowment for the Arts. **Dublin Neighbourhood Study: Paterson, New Jersey.** Bohlin and Powell Planners, WilkesBarre, Penn., 1978.

Park, S. **Storefront Rehabilitation: The Harding Building.** Jackson, Mississippi. U.S. Department of the Interior, Washington, 1980.

Schoettle, B.C. **Main Street: Keeping Up Appearances, Storefront Guidelines.** National Trust, Washington, 1978.

Technical Dossier Series, no. 1: **Philosophy and Approach.** The Heritage Canada Foundation, Ottawa, 1984.

Technical Preservation Services Division. **Preservation Briefs** (series). U.S. Department of the Interior, Washington. n.d.

Materials, Repairs and Maintenance

Bullock, O.M. **The Restoration Manual: An Illustrated Guide to the Preservation and Restoration of Old Buildings.** Silvermine Publishers Inc., Norwalk, Conn., 1966.

Byrne, R.O. **Conservation and Architectural Supply Sources and Brief Bibliography.** Association for Preservation Technology, Ottawa, 1980.

Higgins, S.R. **Annotated Master Specifications for the Cleaning and Repointing of Historic Masonry.** Ministry of Citizenship and Culture, Toronto, 1985.

Insall, D. **The Care of Old Buildings Today: A Practical Guide.** The Architectural Press, London (U.K.), 1972.

Mills, E.D. (editor) **Building Maintenance and Preservation.** Butterworth, London (U.K.), 1980.

The Old-House Journal, Vol. IX No. 4 (special Exterior Painting issue), April, 1981.

Rempel, J.I. **Building With Wood and Other Aspects of Nineteenth-Century Building in Ontario.** University of Toronto Press, Toronto, 1967.

Technical Dossiers Series. The Heritage Canada Foundation, Ottawa.

no. 4: **Wood Conservation.** 1979
no. 5: **Roof Claddings.** 1974
no. 8: **Pesticide Application.** 1982
no. 9: **Insect Control.** 1976
no. 10: **Paints and Finishes.** 1979
no. 14: **Energy Conservation.** 1978
no. 15: **Fungal Decay.** 1979

Technical Preservation Services Division. **Metals in America's Historic Buildings: Use and Preservation Treatments.** U.S. Department of the Interior, Washington, 1980.

Pictorials of Facades and Details

Essex County Council. **Shopfronts.** Essex County Planning Department, Chelmsford, 1981.

Loth, C. and Sadler, J.T. **The Only Proper Style: Gothic Architecture In America.** Little, Brown & Co., 1976.

Signage

Bartram, A. **Lettering on Architecture.** Whitney Library of Design, Billboard Publications, New York, 1976.

City Planning Department, Vancouver. **Gastown Sign Guidelines.** City Planning Department, Vancouver, 1974.

Heal, A. **The Signboards of Old London Shops.** B.T. Batsford Ltd., London, 1947.

The Heritage Canada Foundation. **Commercial Signage Manual.** The Heritage Canada Foundation, Ottawa, 1984.

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Most Recent Publications Available from the Research and Special Projects Branch.

An Introduction to Community Planning
August 1985.

Computers as a Planning Tool
August 1985

A Planner's Reference to Legislation, Provincial Policies and Guidelines,
Updated June 1985

Planning and Design for Commercial Area Improvements
March 1985

Towards Community Planning for an Aging Society
Reprinted 1985

Downtown Management: The State of the Art in Ontario
February 1985
(complement to the following report)

Towards Excellence in Downtown Management
December 1983

Land Use Planning for Energy Conservation
October 1984

The Re-use of Public Buildings
September 1984

Guidelines for Recreational Vehicle Campgrounds
September 1984

Handbook for Energy Efficient Subdivision Planning:
Book 3 Design Implications
September 1984

Ontario

Ministry of
Municipal Affairs